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*Bade/Ngizim Determiner System*

by

Russell G. Schuh



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**BADE/NGIZIM DETERMINER SYSTEM\***

by

Russell G. Schuh

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Definite determiners in the Bade/Ngizim group of the Chadic family can be divided into three groups: demonstratives, the previous reference marker, and associative noun phrase constructions. The demonstrative system consists of affixed demonstratives, anaphoric demonstratives, and deictic predicators. Each of these demonstrative types potentially makes morphological distinctions for "near," "far," and "particular" deictic categories. For each category, there may be morphologically distinct forms for masculine singular, feminine singular, and common plural. Though there is considerable variation from language to language in demonstrative systems, the form and function of the previous reference marker, reconstructed as a suffix *\*-kû*, is quite uniform throughout the group. In associative noun phrases, the first noun must be marked as alienable or inalienable, the second as specific or non-specific. While much reanalysis and realignment in determiner morphology has taken place, a fairly clear picture of the demonstrative system for the proto-language of this group can be reconstructed.

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\*This paper represents some of the results of research done during 1973-1975 in Bedde Division, Northeast State (now Borno State), Nigeria, while I was employed as a Research Fellow in the Centre for the Study of Nigerian Languages of Ahmadu Bello University. Most of the research on Ngizim was done during 1969-1970 in Potiskum, in Fika Division of the Northeast State when I was a Research Associate working under the auspices of a US National Science Foundation Grant, No. GS-2279 (Paul Newman, Principal Investigator). Work on this paper was made possible in part by a UCLA Academic Senate Research Grant, #3257. I would like to extend my thanks to Paul Newman for comments on an early draft of this paper, and to Sandra Thompson, Bill Greenberg, and participants in a syntax seminar at UCLA for comments on section 2.2.

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## 0. INTRODUCTION

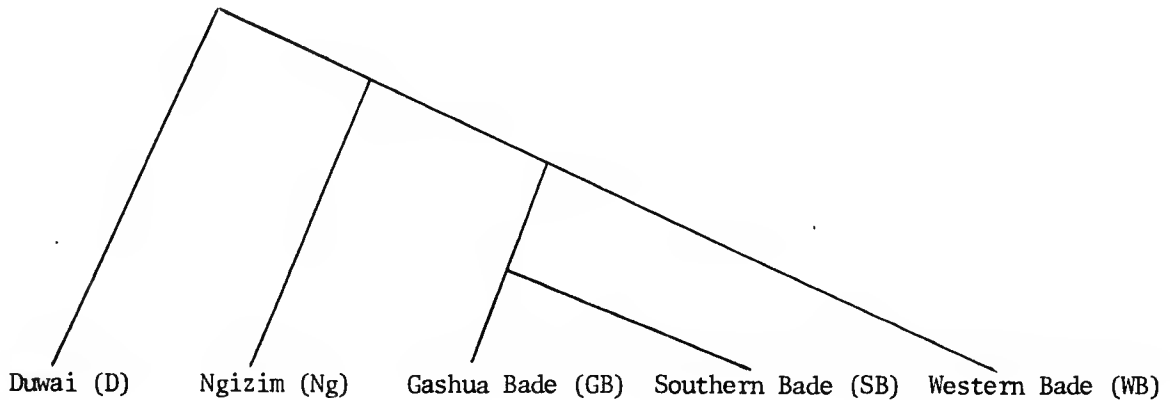
### 0.1. Classification and Nomenclature

The intention of this paper is to give a comprehensive description of the determiner systems of the major dialects in the Bade/Ngizim group of Chadic languages. I include under the term "determiner" system not only the demonstrative system but also associative noun phrases (often called "possessive" or "genitive" phrases). Omitted from the present discussion are indefinite determiners corresponding to English 'a/an', 'some', etc.

Sections 1 through 3 are synchronic descriptions, the first discussing demonstratives and closely allied deictic elements, the second discussing the morpheme indicating previous reference, and the third describing associative noun phrase constructions. Section 4 is historical.

Five different languages or dialects are discussed here. They all belong to a single subgroup of the Plateau-Sahel branch of the Chadic family, viz. group 1b of Greenberg (1963). The internal subgrouping of this group is given in (1):

(1)



In Schuh (1975a, 1975b) I give the general geographical distribution of these languages and dialects. The subgrouping in (1) differs in a couple of respects from that in Schuh (1975a). In particular, a systematic dialect survey made since the writing of that article reveals that Southern Bade (SB) shares more affinity with Gashua Bade (GB) than with Western Bade (WB).<sup>1</sup> The term Duwai (D) replaces "Eastern Bade," used in Schuh (1975a) in order to emphasize the fact that while all the dialects called "Bade" are mutually intelligible, D is an entirely different language, mutually intelligible with neither Bade nor Ngizim. The name "Duwai" (pronounced with initial glottalized *d'* in these languages) is widely used throughout the Bade area to refer to this language and it is the name that appears in Koelle (1854) (cf. Schuh, 1975b). While this term is not used by the Duwai themselves,<sup>2</sup> it does not seem to have derogatory connotations and its use is thus felt to be appropriate.

Ngizim (Ng), too, is mutually unintelligible with Bade, but this is probably a result of geographical separation from the Bade area rather than time depth of separation. I suspect that Ng forms part of the GB-SB subgroup but so far have not been able to find any features which prove this with certainty.

<sup>1</sup>At the time I wrote Schuh (1975a), my research had centered on the variety of GB spoken in and around Gashua itself. It happens that this variety of GB is quite divergent within GB. In particular, a sound change *\*x > k*, which I felt separated GB from SB and WB as a group has, in fact, taken place only in the immediate vicinity of Gashua town, perhaps under the influence of the neighboring Duwai where this sound change has also taken place.

<sup>2</sup>Speakers of Duwai refer to themselves as *ɖvjɛ̃*, which is cognate with the word *bádè*. The proto-Bade word is reconstructable as something like *\*badi*.

0.2. Some General Phonological Rules<sup>3</sup>

There are a number of phonological processes shared throughout this language group. To obviate the necessity for restating these processes in every section in order to explain the phonetic forms of various constructions, the most important rules will be given here in their most general form for continued reference later in the paper.

## 0.2.1. General Tone Rules

High tone is indicated by acute accent (´), low tone by grave accent (`), downstep by a tick ('), falling tone by circumflex accent (^), rising tone by hacek (ˇ). Where a syllable is unmarked for tone, the tone of that syllable is irrelevant or is determined by the environment.

## (2) TONE RAISING

Lo → Hi / Hi \_\_\_\_ where the Lo tone syllable begins in a consonant other than a voiced obstruent and it is not the last syllable of the utterance

/ká kàka/ → [ká káka]  
 /ká màka/ → [ká màka]  
 /ká dāka/ → [ká dāka]

but /ká gàka/ → [ká gàka] (Lo begins in vd. obstruent)  
 /ká kà/ → [ká kà] (Lo is last syllable)

That is, a low tone is raised to high when following a high unless the low syllable begins in a voiced obstruent or is the last syllable before a pause. In some dialects this rule is iterative, i.e. a syllable raised by rule (2) will in turn raise a following low if the proper conditions are met. Usually, if the raised low syllable is followed by high, the latter will be heard as a downstepped high, especially before a pause, e.g. /ká kàká/ → [ká káká].

## (3) TONE LOWERING

Hi → Lo / Lo \_\_\_\_ Hi

/gà-gá-gá/ → [gà-gà-gá]

That is, if a low tone syllable is preceded by low and followed by high, it will be lowered. This rule shows some dialect variation with respect to what syllables can be lowered. For example, in some dialects if the high syllable begins in a voiceless obstruent it will not be lowered, but if it begins in any other consonant it will, e.g. /mà-má-má/ → [mà-mà-má] but /kà-ká-ká/ remains [kà-ká-ká].

<sup>3</sup>In addition to the symbols for tones and vowels given below, the following consonant symbols should be noted: *tl* and *jl* are voiceless and voiced lateral fricatives respectively; *b*, *d*, *ɖ* are labial, dental, and palatal glottalized stops; *y* is a glottalized palatal semivowel (in dialectal or sometimes in free variation with *ɖy*); *ny* is a palatal nasal, NOT a sequence of nasal + *y*; *sh* and *zh* are voiceless and voiced palatal fricatives; *c* and *j* are voiceless and voiced palatal affricates. One further orthographic convention should be noted: labialized velars can occur in syllable final position, e.g. Ng [zákʰtāk] 'Ruppell's griffon'. These will be transcribed with *u* before the velar, e.g. Ng. *zāuktāk*. This orthographic convention is unambiguous since diphthongs cannot appear in closed syllables.

## 0.2.2. General Vowel Rules

In the following rules, doubled vowels are long vowels, and the symbols *ai* and *au* represent diphthongs, not two syllabic segments. The symbol ə represents the high, central, unrounded vowel [ɨ].

## (4) HIGH VOWEL NEUTRALIZATION

*i, u* → ə      except before pause  
           /ki ka/ → [kə ka]  
           /tu ta/ → [tə ta]

That is, medial short high vowels are neutralized to ə. Throughout this entire language group, there is no medial contrast between the short high vowels *i, u, ə*. The vowels *i, u* contrast only word final before pause (there is no prepausal ə). Actually, the vowel quality is conditioned by consonantal environment, so, for example if *u* comes in contact with a following *y*, it will be heard as *i* rather than ə, e.g. /pu ya/ → [pi ya].

## (5) VOWEL CONTRACTION

V + V → V

That is, two vowels in contact are contracted to a single vowel nucleus. What this new vowel will be depends on the vowels involved. Most cases which could occur in any of the languages are covered by the following statements:

- a) If either vowel is short *i, u*, or ə, it is replaced by the other vowel (of course, if both vowels are one of the vowels *i, u*, or ə, rules (4) and (5) will be applied and the result will be ə, e.g. /ki əkta/ → [kəkta]).
- b) If both vowels are short *a*, the result will be short *a*, e.g. /ka aka/ → [kaka]; if one is long *aa* and the other is long or short *a(a)* the result will be long *aa*, e.g. /ka aaka/ → [kaaka].
- c) If the first vowel is short *a* and the second is long *ii*, the result is *ee*, e.g. /ka iika/ → [keeka].
- d) If the first vowel is a long high vowel (which may result from application of rule (6) below), and the second vowel is *a(a)*, rule (5) does not apply and an epenthetic glide is heard between the vowels, i.e. /ii a/ → [iya] and /uu a/ → [uwa].

## (6) MONOPHTHONGIZATION

*ai* → *ii* }      except before a pause  
*au* → *uu* }  
           /kai kaka/ → [kii kaka]  
           /tau tata/ → [tuu tata]

## 1. DEMONSTRATIVE SYSTEM

The demonstrative system for the Bade language group as a whole can be characterized in the form of a grid. The maximal system is schematized in (7):

(7)

		DEICTIC CATEGORIES		
		Near	Far	Particular
SYNTACTIC CATEGORIES	Demons. Suffixes	MASCULINE	Masculine	
			Feminine	
			Plural	
	Demons. Pronouns	FEMININE	Masculine	
			Feminine	
			Plural	
	Deictic Predicators	PLURAL	Masculine	
			Feminine	
			Plural	

For each box in the grid there is potentially a form differing morphologically from that in every other box. In fact, most dialects do not make all the possible differentiations.

DEICTIC CATEGORIES are spatial and/or referential. Only the "near" category can be used to refer to something close by and in sight, only the "far" category can refer to something relatively distant and in sight. Examples in (8)-(10) are from Western Bade.

- (8) a. (near) *eeki, msoo noo vəkəri*  
'look, THIS ONE is his hole'
- b. (far) *a jawee rek dəmaa-msii na ...*  
'let's go to (the place of) THAT DISTANT TREE ...'

It is difficult to make the function of the "particular" category precise. It generally could be translated as 'that same ...', 'that particular ...', 'that there ...', 'this here ...'.

- (8) c. (par.) *Gwayaan gadage gaagare a makaranta. To, gwayaa-msənoo noo, afluwaan da pi uk̄tlen a gaku nyar̄ra.*  
'A big acacia tree was (near) the school. Well, THAT PARTICULAR ACACIA, herons had hatched their young in it in great quantity.'

The "near" form is also used with this meaning. Note the following two sentences, taken from the same folktale referring to the same meat in similar contexts.

- (9) a. (near) *dazgi saasaa-mdo guilla ii ngwaari*  
'he removed all THAT MEAT to his house'
- b. (par.) *akci daa di saasaa-mdənnoo a baramu*  
'they took out all THAT MEAT (that was) in the bin'

Probably because of this semantic overlap with the "near" form (as well as overlap with the previous reference morpheme—see section 2), the "particular" form has been lost as a separate morphological category in some parts of this language group.

The "far" forms are also sometimes used with a referential rather than a purely spatial



function. When they are, it is always in a contrastive sense with some other specific referent expressed or implied, e.g.

- (10) *mdoo kama mdii-m no?*  
(near) (far)

'isn't THIS ONE (that we now have) like THAT OTHER ONE (that we had before)?'

SYNTACTIC CATEGORIES refer to the syntactic function of the demonstrative element. "Demonstrative suffixes" are demonstratives used in conjunction with an overt noun. In some dialects these are special bound suffixes, e.g. GB *sāas-āaw* 'this meat' while in others they are formally identical to the demonstrative pronoun, e.g. SB *sāasā msāu* 'this meat' (in both examples from *sāasā* 'meat'). The "demonstrative pronouns" are those demonstrative forms used when no overt noun is expressed. As noted above, in some dialects these are not formally distinct from the demonstrative suffixes. There are examples of both demonstrative suffixes and pronouns in (8)-(10).

"Deictic predicators" are a class of words used to draw attention to something, e.g. WB *msāa-yū* 'here I am', *mdāi jājēn* 'there are some dogs'. Syntactically they function like French *voilà* and *voici* or Hausa *gāa* in that their syntax is unique to constructions using them. They are words which cannot clearly be put into any general grammatical category and which are followed directly by a noun phrase, expressed or implied. Unlike French and Hausa where the words in question are of verbal origin, however, the deictic predicators of Bade/Ngizim are historically and synchronically part of the demonstrative system. In addition to being used to draw attention to some concrete referent, these words (especially the "near" form) can be used without any particular referent to draw the hearer's attention to some state of affairs. This is a particularly common device in narrative.

- (11) (WB) Q: A'a, *mdoo ba-gām nām?*

A: *Vaumaan atu ma mcaa mcaa.*

Q: 'Hey, what's happened to you?' (lit: this got-you what)

A: 'Then she said THIS AND THAT AND THE OTHER THING.'  
(lit: then she said here (it) is here (it) is)

(Ng) *sau ye naa ndak nii ii zha bai*

'YOU SEE (lit: here (it) is) there were no people coming to make war'

LEXICAL CATEGORIES indicate formal agreement of demonstratives with the lexical category of the noun to which they refer. Not all dialects retain a lexical gender distinction, but for those that do, singular nouns are categorized as masculine or feminine. For animates, inherent sex gender usually corresponds to lexical gender. For inanimates and some wild animals, gender is purely a lexical property.

Dialects vary in whether they assign mass nouns (water, grain) and collectives (termites, eggs) to one of the singular classes or to the plural class.

### 1.1. Gashua Bade (GB)<sup>4</sup>

In GB, demonstrative suffixes are special bound forms:

<sup>4</sup>Section 1.1 describes only the language as spoken in the eastern part of the GB area, especially in the towns *Gāsūwā* (Gashua), *Gāsāmā*, *Āzbāk*, *Tāabāwā*, and *Jlāawūr*. The western part of the GB area has a demonstrative system more like that of SB, to be described in 1.2.

## (12) GB DEMONSTRATIVE SUFFIXES

	Near	Far	Particular
Masculine	-āaw	-āanī	-āanāu
Feminine	-tkū	-tīiwū	-tōndu
Plural	-āandāu	-āandīwū	-āandāu

In GB, all nouns ending in consonants and almost all nouns ending in diphthongs are masculine. Most nouns ending in a simple vowel are feminine. There are some masculine nouns which end in vowels, but these are gradually being shifted to the feminine lexical category. Thus, a number of nouns ending in vowels, e.g. *zāyī* 'rope', *sāasī* 'meat', *kūnū* 'belly', *gwāyī* 'Acacia albida', are grammatically masculine or feminine depending on age of the speaker, village, or stylistic register. Such nouns are invariably masculine in dialects where the proto-Bade gender distinction has been retained (see Schuh (1975a) for evidence for this claim). Where there is a sex gender distinction, nouns ending in a vowel will usually be masculine or feminine according to real gender in GB (cf. the words for 'horse' and 'friend' in (13)).

For masculine and plural nouns ending in a vowel, the long -aa- of the demonstrative suffix replaces the final vowel. For masculine and plural nouns ending in a consonant, the -aa- is always present. For masculine and plural nouns ending in a diphthong, there are two options: (a) the -aa- may remain (the diphthong will be realized as a high vowel followed by an epenthetic glide, via rules (6) and (5d)); (b) the -aa- may be deleted, with the diphthong becoming a long high vowel by rule (6).

## (13) Examples of GB demonstrative suffixes

		Near	Far	Particular
Masculine				
<i>māzāl</i>	'billygoat'	<i>māzālāaw</i>	<i>māzālāanī</i>	<i>māzālāanāu</i>
<i>kwām</i>	'bull'	<i>kwāmāaw</i>	<i>kwāmāanī</i>	<i>kwāmāanāu</i>
<i>wūd</i>	'name'	<i>wūdāaw</i>	<i>wūdāanī</i>	<i>wūdāanāu</i>
<i>gōomāk</i>	'ram'	<i>gōomākāaw</i>	<i>gōomākāanī</i>	<i>gōomākāanāu</i>
<i>kāzāl</i>	'heart'	<i>kāzāaw</i>	<i>kāzāanī</i>	<i>kāzāanāu</i>
<i>kūnū</i>	'belly'	<i>kūnāaw</i>	<i>kūnāanī</i>	<i>kūnāanāu</i>
<i>dīkwā</i>	'stallion'	<i>dīkwāaw</i>	<i>dīkwāanī</i>	<i>dīkwāanāu</i>
<i>māngā</i>	'friend'	<i>māngāaw</i>	<i>māngāanī</i>	<i>māngāanāu</i>
<i>kōorāu</i>	'donkey'	<i>kōorūwāaw</i>	<i>kōorūwāanī</i>	<i>kōorūwāanāu</i>
<i>āsākāi</i>	'porcupine'	<i>āsākīyāaw</i>	<i>āsākīyāanī</i>	<i>āsākīyāanāu</i>
Feminine				
<i>ākū</i>	'goat'	<i>ākūtū</i>	<i>ākūtīiwū</i>	<i>ākūtōndu</i>
<i>tlā</i>	'cow'	<i>tlātū</i>	<i>tlātīiwū</i>	<i>tlātōndu</i>
<i>gwāyī</i> <sup>5</sup>	'A. albida'	<i>gwāyītū</i>	<i>gwāyītīiwū</i>	<i>gwāyītōndu</i>
<i>dīkwā</i>	'mare'	<i>dīkwātū</i>	<i>dīkwātīiwū</i>	<i>dīkwātōndu</i>

<sup>5</sup>The word *gwāyī* may also be masculine.

		Near	Far	Particular
<i>māngā</i>	'friend'	<i>māngātkū</i>	<i>māngātīiwū</i>	<i>māngātōndū</i>
<i>māi</i>	'mother'	<i>māitkū</i>	<i>māitīiwū</i>	<i>māitōndū</i>
Plural				
<i>ūktlētōn</i>	'cattle' <sup>6</sup>	<i>ūktlētōnāandāu</i>	<i>ūktlētōnāandīiwū</i>	<i>ūktlētōnāandōndū</i>
<i>ūktlū</i>		<i>ūktlāandāu</i>	<i>ūktlāandīiwū</i>	<i>ūktlāandōndū</i>
<i>bādāyāt</i>	'Bades'	<i>bādāyātāandāu</i>	<i>bādāyātāandīiwū</i>	<i>bādāyātāandōndū</i>
<i>dēzēzāi</i>	'veins'	<i>dēzēzīyāandāu</i>	<i>dēzēzīyāandīiwū</i>	<i>dēzēzīyāandōndū</i>
		<i>dēzēzīindāu</i>	<i>dēzēzīindīiwū</i>	<i>dēzēzīindōndū</i>
<i>ēgdāamāu</i>	'crocodiles'	<i>ēgdāamūwāandāu</i>	<i>ēgdāamūwāandīiwū</i>	<i>ēgdāamūwāandōndū</i>
		<i>ēgdāamūundāu</i>	<i>ēgdāamūundīiwū</i>	<i>ēgdāamūundōndū</i>

Semantically mass nouns in GB, such as *āawūn* 'grain', *sāasī* 'meat', *pōjl* 'bran', are treated as masculine singular. However, the formally singular noun can be used with a plural demonstrative suffix to mean several units or sections, as in (14):

- (14) *āamōn* (m.sg.) 'water'
- |                  |              |                      |                         |
|------------------|--------------|----------------------|-------------------------|
| <i>āamēnāaw</i>  | 'this water' | <i>āamēnāandāu</i>   | 'these bodies of water' |
| <i>āamēnāanī</i> | 'that water' | <i>āamēnāandīiwū</i> | 'those bodies of water' |

The GB demonstrative pronouns are seen in (15):

- (15) GB DEMONSTRATIVE PRONOUNS

	Near	Far	Particular
Masculine/feminine	<i>īkāu</i>	<i>īkīiwū</i>	<i>īkōndū</i>
Plural	<i>īndāu</i>	<i>īndīiwū</i>	<i>īndōndū</i>

There is no formal gender distinction in the singular pronouns.

Some speakers tend not to use the demonstrative suffixes in (12). Instead, they prefer an analytic construction using the demonstrative pronouns in (15).<sup>7</sup> Two ways of using the forms in (15) as modifiers of nouns have been observed: some speakers simply use the noun directly followed by the demonstrative, e.g. *tēmākū-īkāu* 'this sheep' (*tēmākū*), *tlā-īkīiwū*

<sup>6</sup>According to one informant the plural *ūktlētōn* indicates more than one but not many whereas *ūktlū* indicates a large number.

<sup>7</sup>My impression is that young speakers particularly do not use the demonstrative suffixes. There are undoubtedly factors other than age involved, however, e.g. frequent contact with older, more conservative speakers. One secondary school student from Gasema, a small village near Gashua, consistently used the demonstrative suffixes, though most young people from Gashua, a large town, tend to use the analytic forms.

'that cow' (*tlā*), *kūnū-ŋkāu* 'this belly' (*kūnū*), *gwāmākō-ŋkāu*<sup>8</sup> 'this ram' (*gwāmāk*), *kwāmō-ŋkīwū* 'that bull' (*kwām*), *ūktlātłēnō-ndīwū* 'those cattle' (*ūktlātłēn*). Other speakers add the previous reference morpheme to the noun with the demonstrative following (morpho-phonemically the previous reference morpheme, discussed in section 2.1, has the shape -*wū*), e.g. *tāmākūu-ŋkāu*, *tlāwū-ŋkīwū*, *gōmākūu-ŋkāu*, *kwāmūu-ŋkīwū*, *kūnūu-ŋkāu*, *ūktlātłēnūu-ndīwū*.

While the former construction may properly be viewed as a noun directly modified by a deictic morpheme, the latter is syntactically an appositive construction meaning "the sheep (in question), this one," etc. In general, it is speakers who do NOT use the bound suffixes in (12) who prefer the former, direct juxtaposition construction, while speakers who freely use the bound suffixes will use the latter, appositive construction. Evidently, the construction with noun directly juxtaposed with free demonstrative is replacing the construction with bound suffixes, probably because the morphophonemic problems and the gender agreement make the bound suffix construction more complex.<sup>9</sup>

The GB deictic predicators are given in (16):

(16) GB DEICTIC PREDICATORS

	Near	Far	Particular
Masculine/feminine	<i>ŋkāa(nī)</i>	<i>ŋkīi</i>	<i>ŋkōnāa/ŋkōnāanī</i>
Plural	<i>ñdāa(nī)</i>	<i>ñdīi</i>	<i>ñdōnāa/ñdōnāanī</i>

As with the free demonstratives, there is no gender distinction. The morpheme -*nī* seen on the "near" and "particular" forms is optional in all environments. It cannot be used with the "far" forms.

The deictic predicators can be used alone to mean 'here(he/she/it) is', 'there (they) are', etc. or may be directly followed by a noun or pronoun in which case they agree in number with the complement. The pronouns used are the independent pronouns (*īyū*<sup>10</sup> 'me', *gīi* 'you (m.sg.)', *gōm* 'you (f.sg.)', *ācī* 'him', *ātū* 'her', *jā* 'us (exclu.)', *wā* or *gwā* 'us (incl.)', *wūn* 'you (pl.)', *āksī* 'them'). Both underlying and phonetic forms are given in (17) (cf. phonological rules in section 0.2).

<sup>8</sup>The final -*ə* on the noun stems *gwāmāk*, *kwām*, etc. is an epenthetic vowel which breaks up the three consonant sequence which would otherwise result. When the initial syllabic nasal of the demonstrative follows a vowel, it is no longer syllabic. Instead, it forms the coda of the syllable of which it becomes a part.

<sup>9</sup>There is variation among speakers in the use of the bound demonstrative suffixes and the analytic noun + demonstrative construction. Some speakers still use the bound feminine "near" suffix -*tkū* but use the analytic construction elsewhere. Some speakers use the bound suffixes in the singular, but apparently not in the plural, since the long -*aa*- characteristic of the suffix is absent, e.g. *ūktlātłēnōndīwū* 'these cattle' (cf. (13)).

<sup>10</sup>In isolation, the first person singular independent pronoun is cited as *nīyū*. The proto-Bade independent pronoun was clearly \**īyū*, so the initial *n-* of the GB isolation form is probably an analogical addition based on the first person subject pronoun *nə*.

- (17) *ɛkàa ɛyù* = *ɛkàanɪ ɛyù* 'here I am'  
 [ɛkàayù] [ɛkàanɪyù]  
*ɛkàa gɪi* = *ɛkàanɪ gɪi* 'here you are'  
 [ɛkàa] [ɛkàanɪgɪi]  
*ɛkàa áci* = *ɛkàanɪ áci* 'here he is'  
 [ɛkàaci] [ɛkàanɪáci]  
*ɛkàa álàs* = *ɛkàanɪ álàs* 'here is some sorrel'  
 [ɛkàalàs] [ɛkàanɪálàs]  
*ndàa jà* = *ndàanɪ jà* 'here we are'  
 [ndàa] [ndàanɪjà]  
*ndàa ùktlái* = *ndàanɪ ùktlái* 'here are some children'  
 [ndàak"tlài] [ndàanɪùktlái]  
*ɛkɪi kùkwáa* 'there's a baobab'  
*ndɪi áksi* 'there they are'  
 [ndɛeksɪ]  
*ndɪi kùkwáydt* 'there are some baobabs'  
*ɛkɔ́nàa ɛyù* = *ɛkɔ́nàanɪ ɛyù* 'right here I am'  
 [ɛkɔ́nāayù] [ɛkɔ́nāanɪyù]  
*ɛkɔ́nàa áci* = *ɛkɔ́nàanɪ áci* 'right there he is'  
 [ɛkɔ́nāaci] [ɛkɔ́nāanɪáci]  
*ɛkɔ́nàa kázá* = *ɛkɔ́nāanɪ kázá* 'right here's a chicken'  
*ndɔ́nàa áksi* = *ndɔ́nàanɪ áksi* 'right here they are'  
 [ndɔ́nāaksɪ] [ndɔ́nāanɪáksɪ]  
*ndɔ́nàa gwáyàtāandɪwɪ* = *ndɔ́nāanɪ gwáyàtāandɪwɪ* 'right there are those acacias'

## 1.2. Southern Bade (SB) and Gashua Bade (western part)

SB uses a single set of demonstratives in both adjectival and pronominal functions. The same syntactic system with a formally very similar set of demonstratives is used in the western half of the GB area. The SB and GB (western) forms are listed together in (18):

### (18) SB AND GB (WESTERN) DEMONSTRATIVES

	Near	Far <sup>11</sup>	Particular
(SB, GB) Masculine (SB only) Feminine	msáa	msíwɪ, msíi	msɔ́ndu
(GB only) Feminine	mcáa	mcíwɪ, mcíi	mcɔ́ndu
Plural	mdáa	mdíwɪ, mdíi	mdɔ́ndu

<sup>11</sup>The "far" forms ending in -wɪ were the first forms volunteered by SB speakers and most GB speakers. Only GB speakers from the villages of Zāabūdum and Bɪdā gave msíi, etc. When questioned about this, an SB informant said the forms without -wɪ were acceptable to him, but addition of -wɪ emphasized distance.

When used as noun modifiers, these demonstratives are simply placed after the noun with no changes to either noun or demonstrative other than general phonetic changes. However, there is a difference between SB and the GB subdialect represented here, viz. SB has done away with the masculine/feminine distinction in demonstratives. The former "masculine" forms are now used with all singular nouns.

(19) <sup>12</sup> SB	GB (western) <sup>13</sup>	
<i>gwāmākō-msāu</i> ( <i>gwāmākī</i> )	<i>gwāmākō-msāu</i> ( <i>gwāmāk</i> )	'this ram'
<i>sāasō-msāu</i> ( <i>sāasī</i> )	<i>sāasō-msāu</i> ( <i>sāasī</i> )	'this meat'
<i>kūnō-msāu</i> ( <i>kūnū</i> )	<i>kūnō-msāu</i> ( <i>kūnū</i> )	'this belly'
<i>tēmākū-msāu</i> ( <i>tēmākū</i> )	<i>tēmākū-mcāu</i> ( <i>tēmākū</i> )	'this sheep'
<i>tēmāamēnō-mdāu</i> ( <i>tēmāamēn</i> )	<i>tēmāangēnō-mdāu</i> ( <i>tēmāangēn</i> )	'these sheep'
<i>ōktlā-msīwū</i> ( <i>ōktlā</i> )	<i>ōktlō-mcīi</i> ( <i>ōktlā</i> )	'that cow'
	<i>tlā-mcīwū</i> ( <i>tlā</i> )	
<i>kwāmō-msīwū</i> ( <i>kwām</i> )	<i>kwāmō-msīi</i> ( <i>kwām</i> )	'that bull'
	<i>kwāmō-msīwū</i>	
<i>ōktlāangēnō-mdīwū</i>	<i>ōktlōtlēnō-mdīi</i>	'those cattle'
	<i>ōktlāa-mdīwū</i>	
<i>dīikwā-msōndū</i> ( <i>dīikwā</i> )	(forms not elicited)	'that stallion'
<i>ākū-msōndū</i> ( <i>ākū</i> )	"	'that goat'
<i>gārūwū-mdōndū</i> ( <i>gārūwū</i> )	"	'those goats'

Though the *msāu*/*mcāu*, etc. distinctions are still generally maintained throughout the GB (western) area, there is evidence that this gender distinction is unstable even there. Speakers from two villages, *Azām* and *Pāgā*, used feminine forms with all singulars, giving *gwāmākō-mcāu* and *kwāmō-mcīwū* instead of the forms in (19). A speaker from *Gāsāmū*, a village on the borderline between GB and SB, actually reversed the use of the masculine and feminine forms!

<sup>12</sup>There is a dialectal difference in tonal alternations illustrated in (19). In isolation the words for 'meat' and 'sheep (sg.)' are *sāasī* and *tēmākū* respectively in both dialects. With the demonstrative attached the tones on the noun stems in SB remain Lo-Hi on the last two syllables, but in GB they become Lo-Lo (note that in both dialects, the tones on the word *kūnū* 'belly' become Lo-Lo in this environment). What is involved here is a generalization of rule (3), TONE LOWERING, in GB. In SB (and some other dialects) TONE LOWERING applies only to syllables beginning in a voiced consonant. In GB (and also *Duwai*) TONE LOWERING has been extended to apply to any high tone syllable in the appropriate tonal environment. There is also a second phonological dialect difference, though it does not emerge from the data here. SB has lost rule (6), MONOPHTHONGIZATION. Thus, *gārūwū-mdōndū* 'those goats' does not become \**garwuu-mdōnau*. Unfortunately, I did not elicit this particular phrase from a GB (western) speaker, but on the basis of forms such as *ākū-lā* 'her back' (*ākū* + *lā*) from GB (western), it is evident that MONOPHTHONGIZATION is operative in GB.

<sup>13</sup>The forms with "far" demonstratives ending in *-īi* were recorded from *Zabudum* and *Bida*, the forms ending in *-wū* were recorded from all the other GB (western) villages where data was collected.

As in the demonstratives, SB makes no gender distinction in the deictic predicators (deictic predicators were not elicited for GB (western), but it is assumed that they would make such a distinction).

(20) SB DEICTIC PREDICATORS

	Near	Far	Particular
Singular	<i>ms̄āa(nī)</i>	<i>ms̄īi</i>	<i>ms̄ōnāa/ms̄ōnāani</i>
Plural	<i>md̄āa(nī)</i>	<i>md̄īi</i>	<i>md̄ōnāa/md̄ōnāani</i>

Use of the deictic predicators was not investigated in detail for SB. It is assumed that the morpheme *-nī* seen on the "near" and "particular" forms is always optional as it is in GB and WB. From the forms in (21) it is evident that the third person pronouns used as complements with deictic predicators are *-cī* 'him', *-tū* 'her', *-keī* 'them', making them identical to those of WB (see (31) below) but different from those in GB, which are *ācī*, *ātū*, and *āksī*.

- (21) *ms̄āatū* 'here she is'  
*ms̄āanī āamōn* 'here's water'  
*ms̄īicī* 'there he is'  
*md̄īikeī* 'there they are'

1.3. Western Bade (WB)

WB has a phenomenon in its determiner system not found in other dialects. This phenomenon will be referred to as NUNATION, following R. Lukas (1968). Nunation is a suffix *-n* used on almost all nouns in their citation forms as well as in certain contextual positions, e.g. *t̄m̄d-n* 'mortar', *əzḡəṛə-n* 'foot', *əvj̄āa-n* 'monkey'. While nunation is part of the wider determiner system, not of the demonstrative system, it will be necessary to understand its semantic and syntactic nature before continuing with a discussion of demonstratives and other determiner categories. The discussion here recapitulates in part that in Schuh (1975a), but a number of new facts have been incorporated.

J. Lukas (1968:102) considers nunation to be an overt mark of indefiniteness [*Kennzeichnung der unbestimmten Form des Nomens*]. A variety of facts support this analysis. First, a number of nouns which are always semantically definite do not take nunation in their citation forms,<sup>14</sup> e.g. the compass points (*wēlēā* 'north'), nouns referring to specific times (*t̄n̄āa* 'now', *wāyā* 'next year'), terms used for reference or address (*d̄āadā* 'elder sister', *yāayā* 'elder brother', *bāarā* 'elder paternal uncle'), and proper names (*jl̄āawī*, *kāakū*, *mūuzā*, *cāakwā*).<sup>15</sup>

<sup>14</sup>Unlike Arabic, where the term "nunation" was originally applied to a similar phenomenon, Bade never uses nunation with adjectives in citation form or in attributive position, e.g. *ḡāatlā* 'unripe', *h̄ēetā* 'white', *kūlī* 'pleasant', *əf̄cāan h̄ārā* 'new mat' (lit: mat new).

<sup>15</sup>In fact, proper names are not excluded from adding nunation. Compare the following with the names cited here: *jl̄āawdan*, *kāakwān*, *mūuzdan*, *cāakwān*. Proper names with nunation mean 'a person by the name X' as opposed to a specific person with that name. Proper names can also add the previous reference mark (see section 2), e.g. *jl̄āawdaw*, *cāakwāw*. Not enough examples of such constructions were found in texts to determine their meaning with certainty. Apparently, it is something akin to use of 'that' in an English sentence such as 'now where's that John?'.

Second, in greeting phrases such as *ḡgā mādūwā?* 'how's (your) household?', nunation is not normally used. In such phrases there would always be a definite referent for the noun, of course.

Third, in narratives the first reference to a noun usually takes nunation while subsequent references to the same noun never do. Thus, although there are a few cases where the notion of definiteness vs. indefiniteness does not give an obvious explanation for the presence or absence of nunation (see Schuh, 1975a:108), this notion by and large explains the facts.<sup>16</sup>

R. Lukas (1968:103) segments nouns with nunation into (at least) three parts: Noun Stem + Stem Vowel + Nunation, e.g. *tāmān* 'mortar' can be segmented as *tām* + *a* + *n*. The shape of the stem vowel in some cases will reveal the grammatical gender of the noun: (a) If the stem vowel is short -a-, the noun is always feminine; (b) if the stem vowel is long -aa-, the noun is always masculine or plural; (c)-(d) if the stem vowel is a short high vowel, the form does not reveal lexical gender; (e)-(g) if the stem vowel is a mid vowel or a long high vowel, the form of the noun does not reveal lexical gender.

- |         |                  |     |                                |
|---------|------------------|-----|--------------------------------|
| (22) a. | <i>ḡktlān</i>    | (f) | 'cow'                          |
|         | <i>dān</i>       | (f) | 'eye'                          |
| b.      | <i>ḡvjāan</i>    | (m) | 'monkey'                       |
|         | <i>kūnāan</i>    | (m) | 'belly'                        |
|         | <i>gēmāan</i>    | (m) | 'thigh'                        |
| c.      | <i>ḡkūn</i>      | (f) | 'goat'                         |
|         | <i>gūmcān</i>    | (f) | 'chin'                         |
| d.      | <i>māzārān</i>   | (m) | 'castrated goat'               |
|         | <i>dācān</i>     | (m) | 'hair'                         |
| e.      | <i>gūnēn</i>     | (f) | 'hip joint'                    |
|         | <i>ūgzēn</i>     | (m) | 'pubic hair'                   |
| f.      | <i>ḡpsōn</i>     | (f) | ' <i>Bauhinia reticulata</i> ' |
|         | <i>ḡḡḡōn</i>     | (m) | 'breast'                       |
| g.      | <i>dābāin</i>    | (f) | 'hoe'                          |
|         | <i>māpāndāin</i> | (m) | 'young man'                    |

The reason gender correlates or fails to correlate with stem vowel in the way it does finds its explanation in dialect comparisons. (a) Feminine nouns with short -a- as stem vowel in WB correspond to feminine nouns with final -a elsewhere. (b) Masculine and plural nouns with long -aa- as stem vowel in WB correspond to masculine and plural nouns which end in -i,

<sup>16</sup>In further support of the characterization of nunation as being a mark of indefiniteness, one can cite the fact that it is mutually exclusive with morphemes such as demonstratives, which are inherently definite. However, as I point out in Schuh (1975a:107), this could be explained as merely being part of the morphotactics of the language, not a semantic mutual exclusivity.



-u, or -a elsewhere.<sup>17</sup> (c) Feminine nouns with a short high stem vowel correspond to feminine nouns with a final high vowel elsewhere. (d) Masculine nouns with a short high stem vowel correspond to masculine nouns ending in a consonant elsewhere. In masculine nouns, then, the high stem vowel in WB is merely an epenthetic vowel to prevent a word final consonant cluster, while in feminine nouns it is etymological. (e)-(f) Nouns with mid stem vowels correspond to nouns with the same mid vowels or with the corresponding diphthongs elsewhere.<sup>18</sup> (g) If the stem vowel is a long -ii- in WB, it has a final (short) -i elsewhere. Only a small number of nouns ending in -i outside WB have long -ii- stem vowels in WB as compared with those where WB has a short high stem vowel in feminine nouns and long -aa- in masculine. So far, I have found no explanation for this differentiation of final -i's. No such differentiation for final -u exists, i.e. there are no words with a long -uu- as stem vowel in WB.

(23) GB nouns corresponding to WB nouns in (22)

a.	<i>tlā</i>	'cow'
	<i>dā</i>	'eye'
b.	<i>əvjī</i>	'monkey'
	<i>kūnū</i>	'belly'
	<i>əgmā</i>	'thigh'
c.	<i>ākū</i>	'goat'
	<i>gūmci</i>	'chin'
d.	<i>māzāl</i>	'billy-goat'
	<i>'yāt</i>	'hair'
e.	<i>gūnāyl</i> or <i>gūndi</i>	'hip joint'
	<i>ūgzāi</i>	'pubic hair'
f.	<i>əpsāu</i>	' <i>Bauhinia reticulata</i> '
	<i>fəfdu</i>	'breast'
g.	<i>dābī</i>	'hoe'
	<i>māpāndi</i>	'young man'

Nouns with nunation are the normal citation forms. WB nouns do have a form without nunation or any other overt determiner. R. Lukas (1968:202-204) calls these forms LOCATIVE FORMS [*Lokativform*] since they are invariably used when the noun is the head of a locative phrase

<sup>17</sup>Gender of nouns ending in a vowel in GB and elsewhere cannot usually be predicted except where natural gender is involved. There is one other class of nouns which, when they end in a vowel in GB, invariably have the stem vowel -aa- in WB, viz. mass nouns: 'bran' GB *pāji*, WB *pājdan*; 'mush' GB *kājlūwā*, WB *kājlūwāan*; 'meat' GB *sāasī*, WB *sāasāan*; 'shit' GB *āabū*, WB *āabdan*.

<sup>18</sup>WB has changed all diphthongs to the corresponding mid vowels, i.e. \*ai > ee, \*au > oo. In contrast, GB has changed all word final mid vowels into diphthongs. Ngizim preserves both final diphthongs and mid vowels. For diphthongs, compare Ng *gūzāi* 'pubic hair' and *əpsāu* '*Bauhinia reticulata*' with the forms in (22) and (23). For mid vowels, compare GB *bādāi*, WB *bādēn*, Ng *bādē* 'Bade' and GB *dābīindū*, WB *dābīinōn*, Ng *dābīinō* 'date(s)'.

(see Schuh (1975a:74) and R. Lukas). However, their syntactic distribution extends beyond this type of phrase. In particular they are normally the forms used in narrative after the first mention of a referent. For this reason I prefer to call this the DEFINITE FORM of the noun.

In Schuh (1975a) I argued that in fact it is this definite form which is the WB historical reflex of the normal citation form in other dialects. We would thus expect these definite forms to be identical to the citation forms of other dialects, taking sound changes into account. This is not always the case, however, especially where tones and final vowels are concerned. I further argued that this failure of WB definite forms to correspond to citation forms in other dialects is a result of the fact that in the nunation form, which for WB is now the citation and thus base form, the historically original final vowels have been neutralized for many nouns. Final tone, likewise, has been neutralized since the syllable bearing nunation is always high.<sup>19</sup> Definite forms are now derived from nunation forms. Since the latter frequently give an ambiguous indication of what the final vowel and tone of the definite form should be, speakers have to create definite forms on an ad hoc basis (with certain formal limitations) and frequently create forms which do not correspond to the historically "correct" form. Compare the following WB definite forms with the GB citation forms in (23):

(24) Definite forms of nouns cited in (22)

- |    |             |                                |
|----|-------------|--------------------------------|
| a. | ðkɬlā       | 'cow'                          |
|    | dā          | 'eye'                          |
| b. | ðvjɪ        | 'monkey'                       |
|    | kūnū        | 'belly'                        |
|    | gə̃mɪ       | 'thigh'                        |
| c. | ākɰɪ or ākū | 'goat'                         |
|    | gūmɔɪ       | 'chin'                         |
| d. | māzār       | 'castrated goat'               |
|    | dācɪ        | 'hair'                         |
| e. | gūnɛ        | 'hip joint'                    |
|    | ūgzɛ        | 'pubic hair'                   |
| f. | āpsə        | ' <i>Bauhinia reticulata</i> ' |
|    | ʃə̃ʃə       | 'breast'                       |
| g. | dābɪ        | 'hoe'                          |

<sup>19</sup>Speakers from some areas have falling tone on this syllable with nunation. R. Lukas (1968: 108) suggests that the -n of nunation be reconstructed as \*nā, with low tone, in order to account for the falling tone used by these speakers. While the -n of nunation undoubtedly does come from a morpheme \*nV, comparative evidence suggests that the reconstructed tone should be high (also the vowel was probably -i or -u rather than -a). The falling tone seems to be an intonation peculiarity of such speakers rather than an indication of an original low tone. Such speakers typically give falling tone to any prepausal high tone syllable, even where comparative evidence suggests the original tone was high. A related intonation phenomenon can be heard where some speakers usually realize a phrase final sequence of high-high as high-downstep. This is true of the Amshi subdialect of WB, from which most of the examples in this study were drawn.

In order to get a better idea of the extent to which WB definite forms correspond to etymological form, I did a survey of speakers from several villages in the WB area to find out what definite forms were used corresponding to numation forms with *-aa-* as stem vowel. This class of nouns is of interest because the nouns of this class correspond to nouns ending not only in *-i*, *-u*, or *-a* in other dialects but also in *-ak* (see section 2.3 and fn. 32 for further mention of "kafation"). The main trend which definite forms show away from etymological forms is to use final *-i* in place of original final *-a*, *-i*, *-u* or *-ak*. I thus chose a number of nouns ending in *-a* or *-ak* in GB and elicited definite forms for these words from the five villages named in (25). The WB numation forms, which differ little if at all from village to village are also included. Bade speakers will never give definite forms in isolation, so the forms in (25) were elicited in short sentences containing a locative phrase, e.g. 'a bird landed ON THE RAM', 'what is IN THE OIL?', etc. The definite form is usually used when a noun is the head of a locative phrase, even when it has not been mentioned in previous context. Sometimes informants would first volunteer a form with the previous reference suffix, a possessive pronoun, or even numation. If, after checking for a potential definite form, the informant still gave a form with some overt deictic, I have omitted it from the list. In these cases I have put *nun.* if the numation form was used and *PRM* if the previous reference marker was used.<sup>20</sup>

(25)	Citation		WB definite forms				
	GB	WB	Àmsî	Dàalâ	Yîn	Gwàayð	Tàgàalî
'mouth'	mîyâ	mnyâan	mnyâ	mnyâ	mnyâ	mnyâ	mnyâ
'new millet'	vðrdâ	vðrdâan	vðrdî	vðrdâ	vðrdî	vðrdî	vðrdî
'monitor'	mðgbâ	mùgbâan	mùgbî, mùgbâ	mùbgâ	mùbgâ	mùgbî	nun.
'seeds'	âyâ	âyâan	âyî	âyî	âyâ	nun.	âyû
'jackal'	dðlâ	dðlâan	dðlâ, dðlî	dðlâ	dðlî	nun.	nun.
'grandchild'	kðkâ	kðkâan	kðkî	kðkî	kðkâ	PRM	kðkâ
'mush'	kâjîwâ	kâjîwâan	kâjîwî	kâjîwî	kâjîwî, kâjîwî	PRM	kâjîwî
'palate'	kðakâ	hðahâan	hðahî	hðahâ	hðahî	hðahî	hðahî
'money'	tâugdâ	tâgdâan	tâgdî	tâgdî	tâgdî	tâgdî	tâdgî
'outside'	vâyâk	vâyâan	vâyâ	vâyâ	vâyâ	vâyâ	vâyâ
'field'	fðlâk	fðrkwâan	fðrkwâ	fðrkû	fðrkwâ	fðrkû	PRM
'oil'	mðlâk	mðlâan	mðlî	mðlû	mðlî	nun.	mðlî
'ram'	gðomâk	gwâmâan	gwâmî	gwâmî	nun.	PRM	PRM
'Combretum verticillatum'	tâkûlâk	tâkûrdâan	tâkûrî	?	tâkûrî	tâkûrî	?

<sup>20</sup>Sometimes the initial syllables of the definite forms in (25) are high, rather than low, as in the citation forms. The definite forms were all extracted from larger phrases. These "high" tones are probably lows, raised within the phrase by rule (2), TONE RAISING.

The examples in (25) clearly show that there is neither a systematic correlation between final syllable shape of WB definite forms and the etymological final syllable shape (represented by GB), nor between final syllable shapes of definite forms from one WB subdialect to another. Most striking in definite forms is the frequency of final *-i* (31 out of 60 definite forms seen in (25) vs. 22 with final *-a* and 7 with final *-u*) and the prevalence of final low tone regardless of final tone in the GB forms. It is clear, then, that there is a trend in WB to regularize masculine nouns which end in *-āan* in citation forms by providing them with definite forms which end in *-i*. A rule for the formation of definite forms might be written as in (26):

(26) DEFINITE FORM RULE

<i>-āan</i>	→	<i>-ū</i>	for nouns marked to take this suffix in def. form
		<i>-ā</i>	" " " " " " " " " "
		<i>-ā</i>	" " " " " " " " " "
		<i>-i</i>	" " " " " " " " " "
		<i>-i</i>	for all other nouns in the definite form

The only unmarked suffix is *-i* and nouns are being moved from the marked categories to the unmarked.

Note in (25) that the only two words to use final *-a* in all WB subdialects are 'mouth' and 'outside'. Both these words are semantically locative ('mouth' in locative phrases means 'at the edge of', 'beside'). Since the definite form is used in locative phrases, the frequent occurrence of both these nouns in such phrases would reinforce their continued use of the suffix *-a* and their resistance to a shift to final *-i*.

The discussion of nunation and definite forms has so far concentrated on singular nouns. Plurals in WB also take nunation in their citation forms and have special definite forms. They formally correspond to plural nouns in GB in the same way masculine nouns do:<sup>21</sup>

- (a) Plural nouns ending in a simple vowel in GB end in *-āan* in WB;
- (b) plural nouns ending in a consonant in GB end in *-ān* in WB;
- (c) plural nouns ending in a diphthong in GB have the corresponding mid vowel in WB plus nunation. The definite forms of WB nouns are formed parallel to masculine nouns with corresponding stem vowels.

(27)	GB	WB citation	WB definite (Amsi)	
a.	<i>ūktlū</i>	<i>ūktlāan</i>	<i>ūktlī</i>	'cattle'
b.	<i>gādkān</i>	<i>gādkānān</i>	<i>gādkānī</i>	'pots'
	<i>dām</i>	<i>dāmān</i>	<i>dāmī</i>	'trees'
	<i>āmāt</i>	<i>āmātān</i>	?	'women'
c.	<i>dādāu</i>	<i>dādān</i>	<i>dādō</i>	'eyes'
	<i>ādādu</i>	<i>ādādān</i>	<i>ādādō</i>	'heads'

<sup>21</sup>There are numerous different morphological plural patterns in the Bade group, and dialects frequently differ in which pattern they use for a given noun. In (27) I have chosen examples where GB and the WB subdialect illustrated correspond morphologically.

With the above background on citation forms of nouns in WB, we can now return to discussion of the demonstrative system. The demonstratives of WB are given in (28):

(28) WB DEMONSTRATIVES

	Near	Far	Particular
Masculine	<i>m̄sō</i>	<i>m̄sīi*</i>	<i>m̄sōnō</i>
Feminine	<i>m̄cō</i>	<i>m̄cīi*</i>	<i>m̄cōnō</i>
Plural	<i>m̄dō</i>	<i>m̄dīi*</i>	<i>m̄dōnō</i>

\*The "far" forms frequently have falling tone, for "emphasis."

A first look at the syntax of these demonstratives suggests that they are used much like the corresponding forms in SB (see (18) above and discussion), i.e. they can either be used alone as demonstrative pronouns meaning 'this one', 'those', etc. or they can be used as nominal modifiers by placing them after the noun to be modified. In the latter case, however, there are some special syntactic features not found in SB. When a noun is modified by a demonstrative, nunation must be deleted. In all cases the stem vowel found in the nunation form is retained, including the long -aa- seen in many masculine and plural nouns. Elsewhere, presence of long -aa- in such nouns indicates the presence of a bound suffix, viz. in the cases of nunation and of the previous reference morpheme (see section 2.2).<sup>22</sup> Thus, for WB it seems that we must consider noun + demonstrative to have the structure noun + bound affix rather than simply a loose juxtaposition as we might suggest for SB or for the GB analytical construction illustrated on pp. 9-10.<sup>23</sup>

(29) WB demonstratives as noun modifiers

<i>gwāmāa-msō</i>	( <i>gwāmāan</i> )	'this ram'
<i>māzārē-msō</i>	( <i>māzārēn</i> )	'this castrated goat'
<i>tēmākū-mcō</i>	( <i>tēmākūn</i> )	'this sheep'
<i>sāasāa-mdō</i>	( <i>sāasāan</i> )	'this meat'
<i>tūmākūn-m̄dō</i>	( <i>tūmākūnōn</i> )	'these sheep'
<i>ɔvjāa-msīi</i>	( <i>ɔvjāan</i> )	'that monkey'
<i>kwāmē-msīi</i>	( <i>kwāmēn</i> )	'that bull'
<i>ɔktlā-mcīi</i>	( <i>ɔktlān</i> )	'that cow'
<i>m̄sāakō-mcīi</i>	( <i>m̄sāakōn</i> )	'that tamarind'

<sup>22</sup>Long -aa- as a stem vowel before bound suffixes in WB also correlates with replacement of the final vowel of masculine and plural nouns in GB when the demonstrative suffixes are added (cf. (12) and discussion following it, and also section 4.2.2).

<sup>23</sup>In most of WB, the stem vowel -aa- appears only in nouns where it appears before nunation as well. However, a speaker from *Mūsāari* in Hadejiya Division, the western-most town where Bade is still spoken, gave the following: *kwāmāa-msīi* 'that bull', *tēmāmōnāa-mdō* 'these sheep', *ɔktlāatlōnāa-m̄dīi* 'those cattle'. I assume the citation forms for these nouns are something like *kwāmōn* 'bull', *tēmāmōnōn* 'sheep (pl.)', *ɔktlāatlōnōn* 'cattle'. That is, this speaker inserted a long -aa- stem vowel before demonstratives in masculine and plural nouns even where it did not appear with nunation.

- (29) con't.
- |                  |                |                             |
|------------------|----------------|-----------------------------|
| ðktlāa-mdîi      | (ðktlāan)      | 'those cattle'              |
| gārwo-mdîi       | (gārwon)       | 'those goats'               |
| ðvjāgðetənð-mdîi | (ðvjāgðetənən) | 'those monkeys'             |
| dðmāa-msənð      | (dðmāan)       | 'that (very) piece of wood' |
| māanyəmð-msənð   | (māanyəmən)    | 'that (very) boy'           |
| wūnyā-mcənð      | (wūnyān)       | 'that (very) girl'          |
| mðlāa-mdənð      | (mðlāan)       | 'that (very) oil'           |
| māanyāamð-mdənð  | (māanyāamən)   | 'those (very) boys'         |
| dāmð-mdənð       | (dāmən)        | 'those (very) trees'        |

For some speakers, especially in the southwestern part of the WB area, there exist singular demonstratives without the *m*-portion of the demonstrative, e.g. *gðomāa-sð* 'this ram', *tðmakū-cð* 'this sheep', *kwāmð-sîi* 'that bull', *ðktlā-cîi* 'that cow'. Corresponding plurals \**dð*, \**dîi*, etc. apparently are not used. These forms without the *m*-prefix can be used not only as nominal modifiers but also independently as in the sentence (using the 'particular' form) *cəno no wunaaja bi?* 'is that the dog?' Many WB speakers will not use demonstratives without *m*-, but those who do freely use the forms in table (28) as well.

The WB deictic predicators are given in (30):

(30) WB DEICTIC PREDICATORS

	Near	Far	Particular
Masculine	msāa(nî)	msîi	msənāa/msənāanî
Feminine	mcāa(nî)	mcîi	mcənāa/mcənāanî
Plural	mdāa(nî)	mdîi	mdənāa/mdənāanî

The morpheme *-nî* is fully optional with the "near" and "particular" forms with or without complement. Its use makes no substantive meaning change. It cannot be used with the "far" forms. If the complement is a pronoun, a "shortened" form of the independent pronouns is used. The WB independent pronouns are *ayû* 'me', *agîi* 'you (m.sg.)', *agðm* 'you (f.sg.)', *acî* 'him', *atû* 'her', *ajâ* 'us (excl.)', *agwâ* 'us (incl.)', *awûn* 'you (pl.)', *akcî* 'them'. The *ā*-prefix seen on these pronouns is obligatorily omitted when they are used as complements of the "near" and "particular" forms and is optionally omitted with the "far" forms.

- (31)
- |                         |                             |                        |
|-------------------------|-----------------------------|------------------------|
| <i>msāa-yû</i>          | = <i>msāanî-yû</i>          | 'here I am'            |
| <i>mcāa-gðm</i>         | = <i>mcāanð-gðm</i>         | 'here you (f.sg.) are' |
| <i>mdāa-jâ</i>          | = <i>mdāanð-jâ</i>          | 'here we (excl.) are'  |
| <i>msāa wūnāajānîi</i>  | = <i>msāanð wūnāajānîi</i>  | 'here's your dog'      |
| <i>mcāa wūnāajātkîi</i> | = <i>mcāanð wūnāajātkîi</i> | 'here's your bitch'    |
| <i>mdāa kārēw</i>       | = <i>mdāanð kārēw</i>       | 'here's the stuff'     |

(31) cont.

<i>ṁsīi-yù</i>	or <i>ṁsīi āyù</i>	'there I am' (e.g. in a mirror)
<i>ṁcīi-tū</i>	or <i>ṁcīi ātū</i>	'there she is'
<i>ṁdīi-wūn</i>	or <i>ṁdīi āwūn</i>	'there you (pl.) are'
<i>ṁsīi wūnāajāyūi āa rāwā</i>		'there's your dog, running'
<i>ṁcīi wūnājātkīi āa rāwā</i>		'there's your bitch, running'
<i>ṁdīi jōjēn āa rāwā</i>		'there are some dogs, running'
<i>ṁsōnāa-cī</i>	= <i>ṁsōnāanī-cī</i>	'right here he is'
<i>ṁcōnāa-yù</i>	= <i>ṁcōnāanī-yù</i>	'right here I am' (woman)
<i>ṁdōnāa-kcī</i>	= <i>ṁdōnāanī-kcī</i>	'right here they are'
<i>ṁsōnāa gwāmāan</i>	= <i>ṁsōnāanī gwāmāan</i>	'right here is a ram'
<i>ṁcōnāa gūdkwān</i>	= <i>ṁcōnāanī gūdkwān</i>	'right here's a pot'
<i>ṁdōnāa kājlūwāan</i>	= <i>ṁdōnāanī kājlūwāan</i>	'right here is some tuwo'

When used as a device to draw attention to a state of affairs rather than any particular referent, the feminine form of the deictic predicator is used (see (11) for another example):

(32) *mcaani, nə masə kwamən* 'SEE HERE, I've bought a bull'

#### 1.4. Ngizim

Ngizim has no grammatical gender distinction<sup>24</sup> nor is there a distinction between masculine and feminine demonstrative forms. The demonstrative suffixes used with nouns do not have a morphologically distinct plural form.

(33) NGIZIM DEMONSTRATIVE SUFFIXES<sup>25</sup>

Near	Far	Particular
<i>tkū</i>	<i>tīwū</i>	<i>tōnū</i>
		<i>āangū</i>

While Ngizim does have the three way deictic distinction seen in Bade dialects, the "particular" category is much more limited in use than in Bade. In texts, *tōnū* is found almost

<sup>24</sup>There is a gender distinction in personal pronouns which is used when referring to humans. The feminine pronoun is used when referring to inanimates. With animals, pronoun gender usually corresponds to natural gender, but there is considerable variation. In a single text, the same animal character may be referred to both with a masculine and a feminine pronoun.

<sup>25</sup>Phonetics of the "near" and "far" forms pose some problems. At most I can hear only a voiceless transition between *t* and *k* in the "near" form, even when it is suffixed to a noun ending in a consonant. Such constructions violate an otherwise rigid constraint in this language group against three consonant sequences. As for the "far" form, I find it very difficult to tell whether the suffix has one or two syllables. One informant literate in Hausa and English wrote *tīw* but I have preferred a two syllable transcription.

exclusively at the end of complex noun phrases (those containing relative clauses) or at the end of certain adverbial clauses.<sup>26</sup> Its use with simple nouns is extremely rare in texts, though informants readily accepted such phrases as being meaningful and correct (see examples in (34)). The suffix *-āngū* apparently has the "particular" deictic meaning as well. This suffix is restricted to certain nouns denoting humans (see examples in (34)). It is not accepted with all human nouns, e.g. *\*wūndāngū* 'this (very) son' (*wūn*), *\*māazāmāngū* 'this (very) blacksmith' (*māazām*), *\*māmūwāngū* 'these (very) children' (*māmāu*) were all unacceptable. This suffix is of particular comparative interest because of the long *-aa-* which replaces the final vowel of the noun (see section 4.2.2).

(34) Examples of Ngizim demonstrative suffixes

<i>nən-thū</i>	( <i>nən</i> )	'this person'
<i>tlā-thū</i>	( <i>tlā</i> )	'this cow'
<i>təmāakū-thū</i>	( <i>təmāakū</i> )	'this sheep'
<i>gōomāk-thū</i>	( <i>gōomāk</i> )	'this ram'
<i>vək-thū</i>	( <i>vək</i> )	'this hole'
<i>təmāmkin-thū</i>	( <i>təmāmkin</i> )	'these sheep'
<i>tlā tīiwī</i>	( <i>tlā</i> )	'that cow'
<i>kwām tīiwī</i>	( <i>kwām</i> )	'that bull'
<i>tlāadīn tīiwī</i>	( <i>tlāadīn</i> )	'those cattle'
<i>ndā tīiwī</i>	( <i>ndā</i> )	'those people'
<i>āmā tōnū</i>	( <i>āmā</i> )	'that (very) woman'
<i>tlā tōnū</i>		'that (very) cow'
<i>sōsūu tōnū</i>	( <i>sōsūu</i> )	'that (very) hut'
<i>tlāadīn tōnū</i>		'those (very) cattle'
<i>bēe wāarā āa jlāmā bēlān tōnū</i>		'what would be nice' (lit: thing that it be nice <i>tōnū</i> )
<i>nən-āngū</i>	( <i>nən</i> )	'that (very) person'
<i>ām-āngū</i>	( <i>āmā</i> )	'that (very) woman'
<i>māayīm-āngū</i>	( <i>māayīm</i> )	'that (very) boy'
<i>wūny-āngū</i>	( <i>wūnyā</i> )	'that (very) girl'
<i>nd-āngū</i>	( <i>ndā</i> )	'those (very) people'

Ngizim can mark a singular/plural distinction in the demonstrative pronouns, but there is no gender distinction.

<sup>26</sup>The latter use of *tōnū* is extensively discussed in Schuh (1972), Chapter 8.



## (35) NGIZIM DEMONSTRATIVE PRONOUNS

	Near	Far	Particular
Singular	<i>sāu</i>	<i>sīiwǎ</i>	<i>sōnū</i>
Plural	<i>ndāu</i> <i>jā-ndāu</i>	<i>ndīiwǎ</i> <i>jā-ndīiwǎ</i>	<i>ndōnū</i> <i>jā-ndōnū</i>

The prefix *ja-* on the plural option can also be used in conjunction with nouns to mean 'things/people like ...', 'things/people associated with ...' (*jā-k tlā* 'cows and animals like them') and with question words for pluralization (*jā-gēe?* 'who all?'). With demonstratives it seems to have no function other than to reinforce the plurality of an already plural form.

The demonstrative pronouns can be used together with the demonstrative adjectives (a construction type not possible in Bade). By far the most common such combination is *sūu-thū* 'this one' (*sāu + thū*), but other combinations are possible. In fact, a demonstrative pronoun can be combined with a demonstrative suffix not of the same category. One informant allowed all the combinations in (36) except the starred one (the one omitted combination is missing from my notes; combinations with plural demonstratives were not tested). Various phonological changes covered by rules in section 0.2 have been applied.

(36)	Near Pronoun	Far Pronoun	Particular Pronoun
Near Suffix	<i>sūu-thū</i>	<i>sīiw-thū</i>	?
Far Suffix	* <i>sūu tīiwǎ</i>	<i>sīiw tīiwǎ</i>	<i>sōn tīiwǎ</i>
Particular Suffix	<i>sūu tōnū</i>	<i>sīiw tōnū</i>	<i>sōn tōnū</i>

It is not surprising that *-thū* and *tōnū* can be used with pronouns of other categories since both these suffixes and the corresponding pronouns are used to mean 'the ... in question', 'the particular ...'. Apparently the "far" demonstratives are used only as deictics referring to distant objects. Thus, while *sīiw-thū* might be interpreted as 'that particular distant one', \**sūu-tīiwǎ* would mean '\*this that one'.

While Ngizim has a formally plural demonstrative series, the "singular" series can be used even when referring to plurals. Thus, the following pairs of sentences were accepted as equivalent.

- (37) *jā-ndūu-thū gārāu* = *sūu-thū gārāu* 'these are goats'  
*jā-ndīiw tēmāmkīn* = *sīiw tēmāmkīn* 'those are sheep'

Ngizim cannot use the plural demonstratives with singulars when referring to mass nouns which can't be divided into individuals. Thus, *sūu-thū āptā* 'this is flour' is acceptable but \**jā-ndūu-thū āptā* is not. However, nouns which are otherwise treated as mass nouns but which can be divided into individuals can be referred to by either singular or plural pronouns, e.g. *sūu tārūwǎ* = *ndūu tārūwǎ* 'these are termites'.

The deictic predicators of Ngizim also have singular and plural forms:

## (38) NGIZIM DEICTIC PREDICATORS

	Near	Far	Particular
Singular	sāw(tāi)	sīi(tāi)	sōnāa(tāi)
Plural	ndāw(tāi)	ndīi(tāi)	ndōnāa(tāi)

Although the "near" demonstrative pronouns, *sāw*, etc. and the deictic predicators, *sāw*, etc. sound the same (except for tone) before pause, they are underlyingly different. When not prepausal the diphthong of the pronoun becomes [uu] by rule (6), e.g. *sūu mārdu* 'this is millet', while that of the deictic predictor remains a diphthong or changes to [oo], e.g. *sāw mārdu* or *sōo mārdu* 'here is some millet'. In (39) I have written *aw* or *oo* depending on the way the particular example was transcribed in my notes.

The morpheme *tāi* may be used or omitted in all environments with no substantive meaning change. As with demonstrative pronouns, the plural deictic predicators are not obligatory when referring to plural complements. The pronouns used as complements are the independent pronouns (*īyū* 'me', *cī* 'you (m.sg.)', *kēm* 'you (f.sg.)', *ācī* 'him', *ātū* 'her', *jā* 'us (excl.)', *wā* 'us (incl.)', *kūn* 'you (pl.)', *ākci* 'them'):

- (39) *sōo īyū* = *sōotīi īyū* 'here I am'  
*sāw ācī* = *sōotīi ācī* 'here he is'  
*sōo jā* = *sōotīi jā* = *ndāw jā* = *ndāwtīi jā* 'here we are'  
*sōo fānā* = *sōotīi fānā* 'here's a calabash'  
*sīi ātū* = *sīitīi ātū* 'there she is'  
*ndīi ākshī* = *ndīitīi ākshī* 'there they are'  
*sīi dāagū* = *sīitīi dāagū* 'there's the town'  
*sīi tlāadīn* = *sīitīi tlāadīn* = *ndīi tlāadīn* = *ndīitīi tlāadīn* 'there are some cattle'  
  
*sōnāa ātū* = *sōnāatīi ātū* 'right there she is'  
*sōnāa cī* = *sōnāatīi cī* 'right there you (m.sg.) are'  
*sōnāa kūn* = *sōnāatīi kūn* = *ndōnāa kūn* = *ndōnāatīi kūn* 'right there you (pl.) are'  
  
*sōnāa jlākwāk* = *sōnāatīi jlākwāk* 'right there is a rake'  
*sōnāa āgwāi* = *sōnāatīi āgwāi* = *ndōnāa āgwāi* = *ndōnāatīi āgwāi* 'right there are some eggs'

## 1.5. Duwai

Like Ngizim, Duwai does not have grammatical gender. Duwai further resembles Ngizim in having no number distinction in the demonstrative suffixes. Finally, the dialect of Duwai on which I have collected the most data, that of *Gāngāwā*, has only "near" and "far" deictic categories. I did collect some data from a Duwai speaker from the village of *Cirāwā* who had a three way deictic distinction. Both the *Gāngāwā* and *Cirāwā* forms are given in (40):

## (40) DUWAI DEMONSTRATIVE SUFFIXES

## Gangawa

Near	Far
nō	nāwō <sup>27</sup>

## Cirawa

Near	Far	Particular
nō	nākō	nāwō <sup>27</sup>

The tables in (40) show that the Cirawa "particular" form is identical to the Gangawa "far" form. The examples in (41) are all from the Gangawa dialect except for those marked (Ci). The forms with the suffix *nāwō* exist in Cirawa but would have the "particular" meaning.

- (41)
- |                           |                               |                 |
|---------------------------|-------------------------------|-----------------|
| <i>sāi-nō</i>             | ( <i>sāyā</i> ) <sup>28</sup> | 'this pot'      |
| <i>tlā-nō</i>             | ( <i>tlā</i> ) <sup>28</sup>  | 'this cow'      |
| <i>kōm-nō</i>             | ( <i>kōm</i> )                | 'this bull'     |
| <i>əgjləŋ-nō</i>          | ( <i>əgjlək</i> )             | 'this hole'     |
| <i>tlākciṭ-nō</i>         | ( <i>tlākciṭ</i> )            | 'these cattle'  |
| (Ci) <i>gūwā-nākō</i>     | ( <i>gūwā</i> )               | 'that axe'      |
| (Ci) <i>əgjləŋ-nākō</i>   |                               | 'that hole'     |
| (Ci) <i>tləṭlṭiṭ-nākō</i> | ( <i>tləṭlṭiṭ</i> )           | 'those cattle'  |
| <i>gūwā-nāwō</i>          |                               | 'that axe'      |
| <i>kəndāi-nāwō</i>        | ( <i>kəndāi</i> )             | 'that mat'      |
| <i>gəiwən-nāwō</i>        | ( <i>gəiwən</i> )             | 'that elephant' |
| <i>səkāt-nāwō</i>         | ( <i>səkāt</i> )              | 'that pumpkin'  |
| <i>təmdagūkcīṭ-nāwō</i>   | ( <i>təmdagūkcīṭ</i> )        | 'those sheep'   |

Duwai has a number distinction in the demonstrative pronouns. As with the demonstrative suffixes, the Gangawa dialect of Duwai has only a two-way deictic distinction whereas the Cirawa dialect has a three-way distinction. Besides the deictic category difference, these dialects also differ in the form of the plural pronoun itself:

## (42) DUWAI DEMONSTRATIVE PRONOUNS

## Gangawa

	Near	Far
Singular	ḡgānō	ḡgānāwō
Plural	ḡdāwō	ḡdāwāwō

## Cirawa

	Near	Far	Particular
Singular	ḡgānō	ḡgānākō	ḡgānāwō
Plural	ḡdōnō	ḡdōnākō	ḡdōnāwō

<sup>27</sup>These suffixes are pronounced [nōwō]. While [o] (phonemically /o/) does contrast with /a/ before pause, there are no short /o/'s word internal. Thus, the penultimate vowel must be /a/, backed and rounded before /w/.

<sup>28</sup>In Duwai, the final -a of some words becomes -ə when not before pause. Thus, /sāyā-nō/ → *sāyā-nō* → *sāyē-nō* → [sāi-nō]. In other words, however, a final -a remains [a] in all environments. I hear no phonetic difference between these two "a's" before pause nor can I find any conditioning environment or historical explanation for their different behavior. Of some 130-140 nouns ending in -a which I collected, a little over two-thirds retain the -a. See below (100) and fn. 68, where a further manifestation of this difference is given.

The plural Gangawa pronouns are formally identical to the phrases *ndiū-nō* 'these people' and *ndiū-nāwō* 'those people', but sentences like *ndiū-nō tlākci* 'these are cattle' show that this is a case of homophony, not of confusion on my or my informant's part.

Like the demonstrative suffixes, the Duwai deictic predicators do not mark number. Deictic predicators were collected only from the Gangawa dialect, which, as expected, has only a two-way deictic distinction:

(43) DUWAI DEICTIC PREDICATORS (Gangawa)

Near	Far
<i>nāmū</i>	<i>nāamū</i>

As in Bade and Ngizim, these words can be used alone to mean 'here it is', 'there it is', etc. or with noun or pronoun complements. When the complement is a pronoun, the independent pronouns are used (*iyo* 'me', *kli* 'you (m.sg.)', *kām* 'you (f.sg.)', *lici* 'him', *itō* 'her', *gē* 'us (excl.)', *gō* 'us (incl.)', *kū* 'you (pl.)', *ōkshī* 'them').

- (44)
- |                         |                             |
|-------------------------|-----------------------------|
| <i>nām-iyo</i>          | 'here I am'                 |
| <i>nāmō-kli</i>         | 'here you (m.sg.) are'      |
| <i>nām-itō</i>          | 'here she is'               |
| <i>nāmō-gē</i>          | 'here we are'               |
| <i>nāmō tlā</i>         | 'here's a cow'              |
| <i>nāmō sāyākcī</i>     | 'here are some pots'        |
| <i>nāam-lici</i>        | 'there he is'               |
| <i>nāam-ōkshī</i>       | 'there they are'            |
| <i>nāam gāiwōn</i>      | 'there's an elephant'       |
| <i>nāam dōgdōkwākcī</i> | 'there are some Nile perch' |

## 2. THE PREVIOUS REFERENCE MARKER (PRM)

Whereas the demonstratives in this language group show considerable variation from one language or dialect to another, the form and function of the PREVIOUS REFERENCE MARKER (PRM) is quite uniform. This morpheme is a suffix added to a noun indicating that a particular person or thing has been referred to in previous context. In addition to occurrences of the PRM which involve actual repetitions of a noun referring to a particular individual or individuals, it also may be used where the noun to which it is attached has not been mentioned, but something in context presupposes its existence. In the sentences in (45) (from WB) the underlined noun has the PRM because of its presupposed existence from something in previous context.

- (45) ... *Baaba mtu. Zaneke taba-w ye a gaane ...*  
 'Dad has died. The shroud for THE BURIAL is at my place ...'  
 (death presupposes a burial)
- uktlew talla da daami, se da gaptakōn gaju-w*  
 'all the children were finished off and only THE YOUNGEST remained'  
 (existence of children presupposes a youngest one)

A somewhat different syntactic function of the PRM is to mark the presence of an understood direct object of the verbal noun of a transitive verb. This is seen in particular in the imperfect aspect, where the verbal noun, rather than a finite verb form, is used. Thus, in the examples of (46a), where the verb is transitive, the PRM is used when no object is expressed, but in the examples of (46b), where the verbs are intransitive, the PRM is absent (examples are from GB):<sup>29</sup>

- (46) a. *nā tāaksā-w* 'I will tie (it)'  
           cf. *nā tāaksā-k ākū* 'I will tie up the goat'  
           *nā gāfū-w < /nā gāfi-w/* 'I will catch (it)'  
           cf. *nā gāfā-k tēā* 'I will catch the cow'
- b. *nāa kōnā* 'I will spend the day'  
      *nā jēbāi* 'I will sit down'

Related to this use of the PRM on verbs is its use on nouns in Ngizim to indicate an unexpressed possessor.

(47) (Ngizim)

*wunyak bəjlamu da yi da ram ii afku-w naa abancin miyu-w*  
 'THE DAUGHTER OF THE HYENA went and told HER father and the co-wives of HER mother'  
*daa dai albuuta, kunu-w naa dābiino naa gooro*  
 'he took out a CLOTH, inside IT were dates and kola nuts'  
 (... the interior of IT had dates ...)

This usage is not found in Bade or Duwai (pronouns would be required) except for its occasional appearance in locative phrases, e.g. from WB

- (48) *atu da tli daukti baramau, atu əzgaaga ma amangwaara a kunaa-w pəm*  
 'she went and took up THE GRAIN BIN (but) she didn't know her co-wife was inside IT'  
 (... her co-wife was at the interior of IT)

The PRM for the proto-language can be reconstructed *\*-kū*. In proto-Bade, its shape was invariant for all nouns, masculine, feminine, or plural. Early in the history of this language group the *\*k* began to weaken to *w* between vowels. Since the vast majority of words end in a vowel, most nouns with the PRM attached were now heard with a suffix *\*wū*. This numerical preponderance of the *\*wū* allomorph of *\*kū* early led to its analogical extension to all nouns. Reflexes of the *\*wū* allomorph are the only form of the PRM now found in most dialects, though reflexes of the velar stop still exist in Ngizim and some Duwai dialects (see section 2.3 and 2.4 for details).

## 2.1. Gashua Bade

The PRM has two allomorphs in GB, given (49):

<sup>29</sup>The *-k* seen in the examples with an expressed object is the associative linker discussed in section 3. While it is historically related to the previous reference marker (see section 4), there is no synchronic connection.

- (49) PRM → -wū / V \_\_\_\_  
                   -ūu / C \_\_\_\_

Nouns in (50) with PRM attached are given in phonetic forms, which are accounted for by the rules in section 0.2.

- |      |         |             |            |                 |
|------|---------|-------------|------------|-----------------|
| (50) | ākū     | 'goat'      | ākū-wū     | 'the goat'      |
|      | kāzl    | 'heart'     | kāzū-wū    | 'the heart'     |
|      | dīkwā   | 'horse'     | dīkwā-wū   | 'the horse'     |
|      | wūd     | 'name'      | wūd-ūu     | 'the name'      |
|      | kōorāu  | 'donkey'    | kōorūu-wū  | 'the donkey'    |
|      | āsākāi  | 'porcupine' | āsākīi-wū  | 'the porcupine' |
|      | bādāyāt | 'Bades'     | bādāyāt-ūu | 'the Bades'     |

## 2.2. Western Bade

The PRM in WB is reduced to the shape *-w* for all nouns. The high tone preceding the *w* indicates that the tone of the syllable of which the PRM is part is always high. The noun to which the PRM is attached bears the same stem vowel as it has with nunation and the demonstrative suffixes. The nouns in (51) illustrate the nouns given above in (22) with the PRM attached:

- |      |          |           |                                   |
|------|----------|-----------|-----------------------------------|
| (51) | āktlā-w  |           | 'the cow'                         |
|      | dā-w     |           | 'the eye'                         |
|      | āv jāa-w |           | 'the monkey'                      |
|      | gāmāa-w  |           | 'the thigh'                       |
|      | ākū-w    | [ākūu]    | 'the goat'                        |
|      | gūmcū-w  | [gūmcūu]  | 'the chin'                        |
|      | māzārū-w | [māzārūu] | 'the castrated goat'              |
|      | dācū-w   | [dācūu]   | 'the hair'                        |
|      | gūnē-w   |           | 'the hip joint'                   |
|      | āpsō-w   |           | 'the <i>Bauhinia reticulata</i> ' |
|      | dābīi-w  |           | 'the hoe'                         |

Unlike the other languages and dialects of this study, WB has a form of the noun which would appear to be in semantic competition with the PRM, viz. the definite form of the noun, discussed on pp. 15-18. A definitive statement on the distribution of nunation forms, definite forms, and PRM forms will require a much more detailed study of texts than I have been able to complete, but some distributional statements can be made. The following table will serve as a summary and a point of departure:

(52)

		Nunation	Definite	PRM
Absolute ('no context') uses	Citation (generic nouns)	+	-	-
	Citation (specific nouns)	Marked (see fn. 15)	+	Marked (see fn. 15)
	Vocatives	-	+	- (?)
Narrative uses (generic nouns only)	First mention in a narrative	+	-	-
	Repeated mention <sup>30</sup> of a noun with same referent	-	+	+
	First mention of a noun implied by previous context (cf. (45))	-	- (?)	+
	Head of a locative phrase	Possible but less common than definite	+	OK if covered by one of above
Verbal nouns	Citation	+	-	-
	Head of verb phrase with no object expressed	-	+	+ (Marked?)
	Head of a nominalized complement phrase without an overt direct object	+	- (?)	+ (when a definite object understood from context?)

Notes on (52):

- (i) Plus (+) indicates that the form indicated is grammatical and in common use. Minus (-) indicates that the form is not found in that context.
- (ii) Question mark indicates that research to date has shown no counterexamples.
- (iii) The term "generic" means nouns that could denote a class of referents while "specific" means nouns such as proper names, compass points, etc. which denote specific referents (cf. discussion, p. 13).

The facts regarding use of the nunation form in absolute and narrative contexts is accounted for by the discussion on p. 14. As for the definite forms and the PRM, in these two contexts a tentative suggestion is that use of the definite form requires DIRECT EXPERIENCE with a

<sup>30</sup>The nunation form is possible when the repeated noun is part of a phrase recapitulating a previous segment of the narrative but adding no new information, as in the following example: ... *aci dauktiitu amangwan. Uktiitu amangwan yaumaan, daaci...* '... he got her (first wife) A CO-WIFE. When he had gotten her A CO-WIFE, well ...'.

referent, while use of the PRM requires only INFERRED EXISTENCE. Inference of existence could of course come from previous mention and in fact more often than not it would have this source. For this reason, both the definite form and the PRM are common in narratives where a previously mentioned referent is repeated. For example, in (53) the same referent is mentioned twice, the first time with the PRM, the second time with the definite form.

- (53) *Kəntapo da ne ii reŋ miina-w da dari nama, "Mas! Mas! Mas!"*  
*No, daaci, miini da tli ...*

'Kəntapo went to (the place of) THE LION [PRM] and said, "Shoo! Shoo! Shoo!"  
 Well, then, THE LION [def. form] got up ...'

Vocatives use only the definite form, never the PRM or nunation, e.g. *Madawii* 'O, shepherd!' (never \**Madawaa-w*), *Kaaka Kayi* 'O, Grandpa squirrel!' (never \**Kaaka Kayaa-w*). Vocatives and citation of specific nouns (proper names, compass points, etc.) seem to be the only cases where direct experience is involved but where neither previous reference nor inferred existence are.

On the other hand, in cases such as those illustrated in (45) where the PRM is used on nouns implied by context but not specifically mentioned, the speaker and/or hearer need not have had any direct knowledge of the referent.

Use of the definite form in locative phrases, which led R. Lukas (1968) to call this the LOCATIVE FORM is not always easy to explain. Several different cases can be distinguished, as illustrated in (54a-e):

- (54) a. *aci aiko kazamən a wakak pagaala*  
 'he (squirrel) saw a young woman up on THE TOWER  
 [which the farmer had in his field for chasing birds]'  
*daaci, raapaw dambali ii kunu ɣəri*  
 'then the axe blade flew off into THE HOLLOW  
 [of the tree, which had been mentioned earlier]'
- b. *atu jii maduwa*  
 'she went HOME'  
*akci da nii kunuk dā da gafii wun səno maduwa ako baaga*  
 'they went into TOWN and they got the son a house beyond THE TOWN WALL'  
*əbjlaməlamən kwan a ne ii asəki*  
 'three hyenas were going to MARKET'  
*mdən da jlami kaasoori a pata*  
 'a man built his house in THE BUSH'
- c. *aci əkfii kunu*  
 'he went INSIDE'  
*atu aikon ɔdayow paramma*  
 'she could see the gourds FAR OFF'
- d. *əbjlamən pəmbi da dyawi ukteleera a vəki*  
 'a hyena once gave birth to her children in A HOLE'  
*mazəmən da zəmi da daahwiitu ii ɣərawa sərən*  
 'the blacksmith forged (it) and put (it) into TWO GOURDS for her'  
*aidi-yu ii kunuk diina*  
 'wrap me up in A CLOTH'



- e. *sai agwarga ii daan baam*  
 'let's move to A DIFFERENT TOWN'  
*sai kayi da ne askuk duwun, duwuri agure*  
 'then the squirrel came up on A HORSE, his horse (being) a hare'

The examples in (54a) are easily accounted for in that they repeat a noun already mentioned. Examples like those in (54b) name a place which, while not specific in an absolute sense such as 'east', 'yesterday', 'Gashua', etc., are specific in the context where they occur.<sup>31</sup>

The underlined words in (54c) are "relational" nouns showing locative relationships to some deleted noun, e.g. *kunu* has as its primary meaning 'belly' but here it could be interpreted as 'interior (of X)'. Since the deleted noun is known from context in (54c), we might suggest that the relational noun is also known from context and hence the definite form is appropriate. A different, syntactically oriented interpretation, suggests itself, however, viz. only nouns functioning as heads of noun phrases take determiners. Relational words like *kunu* in (54c) never take nunation; they can take the PRM (see (48)), but the function of the PRM here is to mark deletion of a noun phrase, not to mark previous reference of the relational word. In a phrase like *ā kūnū-ŋ mādiwā* 'in the house' (lit: at belly-of house), *kūnū-* functions much like *-side* or *top* in English 'inside (the house)', 'on top (of the house)'. The exact structure of such phrases is not clear, but the words *kūnū-*, *-side*, and *top* are certainly not the heads of noun phrases. When words are used in functions other than the head noun phrases we are no longer in a position to say that they have determiners at all. Thus, in phrases like the ones in (54c) absence of a suffix is not a sign of a  $\emptyset$  determiner. Such phrases simply illustrate forms these relational words take when not accompanied by a noun phrase complement or some overt mark of a deleted noun phrase complement.

It is the examples in (54d) which are difficult to explain. The underlined nouns are indeed heads of noun phrases, but they are neither specific in the sense of those in (54b) nor are they definite by virtue of having been mentioned in previous context. Absence of nunation is not an automatic property of nouns in locative phrases, however, as the examples in (54e) show. Whether there is some meaning distinction between phrases like those in (54d) and (54e) I cannot now say. Both are common in texts. The vast majority of locative phrases in texts fall into one of the categories in (54a-c), where absence of an overt determiner can be explained. Examples like those in (54d) must remain unexplained for now.

Finally, we turn to the forms of verbal nouns. Since verbal nouns are generic nouns in the sense given on p. 29, their citation forms require nunation, e.g. *rāwā-n* 'running', *tāksā-n* 'tying', *gāḡā-n* 'catching'. When used in nominalized complements, verbal nouns have nunation as in (55a) or the PRM as in (55b).

- (55) a. *a jawee baran*  
 'let's go HUNTING'  
*akci fage psan amnya kumbi*  
 'they go TO BATHE at the edge of the lake'
- b. *deeki kajluwaan deŋ mɔlaan amma aci lagii ta-w pɔm*  
 'he saw food with oil but he didn't stop TO EAT IT'  
*da tadiyaane saasaan gamta i kamooraane, ai ye, nɔ bataata paasa-w-m*  
 'they left a dead animal on my farm and I can't DRAG IT AWAY'

<sup>31</sup>Note that some of the same nouns used in similar contexts in English are treated like proper names in that they take no definite article, e.g. 'I went home/to town/to market'.

Nunation can be used on verbal nouns of transitive verbs in such complements, e.g. on the verb *əpsā-n* 'wash' in (55a), only when the verb is used in a general sense (no specific object implied). If a specific object of a transitive verb is known from context, as in (55b), the PRM is required. Here the PRM serves the same function as it does with locative relational words as in (48), i.e. it is not strictly speaking a determiner of the verbal noun since it carries no implication of previous mention of that verbal noun. Nevertheless, nominalized phrases structurally are normal noun phrases and it is not surprising that we find nunation used as a determiner in such phrases. I have found no examples of verbal nouns in the definite form in nominalized phrases, but this is probably a function of the rareness of contexts for such forms rather than an absolute restriction against the definite form in such phrases.

The verbal noun is also the form of the verb used as the head of a verb phrase in the imperfect aspect. In contrast to nominalized phrases, nunation cannot be used on verbal nouns in this context. If the verb is intransitive or transitive with no overt object, the definite form (perhaps more properly, a form with no determiner) is the form used most frequently, e.g. *nā nāwā* 'I am running', *nā tākā* 'I am tying (it)', *nā gāz* 'I am catching (it)'. WB differs from other Bade dialects, Ngizim, and Duwai in that it normally does not use the PRM on transitive verbs with no overt object (compare the GB examples in (46a) to the WB examples just cited). It is possible to use the PRM in such contexts in WB but informants' reactions suggest that it conveys some additional but so-far ill-defined meaning beyond mere absence of an object. The facts regarding use of "determiners" with locative relational nouns and with verbal nouns as heads of imperfect verb phrases are virtually the same: nunation cannot be used at all, a form without overt determiner may be used when no noun phrase complement is present, and the PRM can optionally be used to show deletion of a noun phrase complement. The reason for this parallelism between verbal nouns in verb phrases and relational nouns in locative phrases is clear, viz. in neither case can the noun be said to take any determiner at all since in neither case is it the head of a noun phrase. The PRM used with these words is not functionally a determiner, and the form with no overt suffix is not the definite form, but simply the form of that word with no expressed complement. Nunation has only a determiner function and is thus excluded from such phrases.

### 2.3. Ngizim

The previous reference marker in Ngizim has three phonologically conditioned allomorphs, with the distribution given in (56):

#### (56) FORM OF PRM IN NGIZIM

- a. *-wū* after a low tone monosyllabic nouns ending in long vowel or diphthong<sup>32</sup>
- b. *ʔw* after *-a*, *-i*, *-u*
- c. *-gū* elsewhere, i.e. after consonants, mid-vowels, diphthongs, and optionally in environments (56a and b)

<sup>32</sup>This is an important class of nouns, albeit a small one. The only noun covered by the "long vowel" part of the rule is *dāa* 'town', which is one of the very few nouns in the language which has a final long vowel. There are several low tone monosyllabic words ending in *-ai* (see examples below), but none ending in *-au*.

NB: For nouns ending in *-k*, most older speakers drop the *-k* and follow sub-rule (56b), adding *-w*; younger speakers retain the *-k* and follow sub-rule (56c)<sup>33</sup> (with assimilation of *k* to *g*).

<i>dāawū</i>		( <i>dāa</i> )	'the town'
<i>rīiwū</i>		( <i>rāi</i> )	'the place'
<i>tlāw</i>		( <i>tlā</i> )	'the cow'
<i>shūw</i>		( <i>shī</i> )	'the base'
<i>wākdw</i>		( <i>wākā</i> )	'the tree'
<i>mārūw</i>		( <i>mārī</i> )	'the beard'
<i>mārdūw</i>		( <i>mārdū</i> )	'the millet'
<i>gōomdw</i>	(older)	( <i>gōomāk</i> )	'the ram'
<i>gōomāg-gū</i>	(younger)		
<i>āasūw</i>	(older)	( <i>āasāk</i> )	'the market'
<i>āasāg-gū</i>	(younger)		
<i>vūw</i>	(older)	( <i>vāk</i> )	'the hole'
<i>vāg-gū</i>	(younger)		
<i>gūzāp-gū</i>		( <i>gūzāp</i> )	'the slave'
<i>jlūgwān-gū</i>		( <i>jlūgwān</i> )	'the sauce'
<i>kārēe-gū</i>		( <i>kārē</i> )	'the stuff'
<i>sōonōo-gū</i>		( <i>sōonō</i> )	'the shoe'
<i>kāfīi-gū</i>		( <i>kāfāi</i> )	'the spitting cobra'
<i>gārūu-gū</i>		( <i>gārāu</i> )	'the goats'
<i>shūu-gū</i>		( <i>shāu</i> )	'the shit'

#### 2.4. Duwai

The Gangawa and Cirawa dialects of Duwai both have a single allomorph of the PRM for all environments, viz. *-wō*.

##### (58) Duwai (Gangawa and Cirawa) PRM

<i>sāi-wō</i>	( <i>sāyā</i> ) <sup>28</sup>	'the pot'
<i>gūwā-wō</i>	( <i>gūwā</i> ) <sup>28</sup>	'the axe'
<i>gāiwāi-wō</i>	( <i>gāiwān</i> )	'the elephant'

<sup>33</sup>For most nouns ending in *-k*, the *k* is not etymologically part of the root. I do not yet fully understand how this phenomenon of KAFATION entered the Bade language group, but it must have its origins in the determiner system as evidenced by the fact that not only is it mutually exclusive with the PRM in Ngizim, but also it shows unusual distributional properties in Bade, e.g. nouns with KAFATION in the singular do not have a *k* in the plural form. KAFATION entered this language group after the split between Duwai and the rest of the group as evidenced by words such as the following: Ng *gōomāk* 'ram', D *gām*; Ng *mārāk* 'oil', D *mār*.

(58) cont.

<i>sə̀kātũ-wɔ</i>	( <i>sə̀kāt</i> ) <sup>34</sup>	'the pumpkin'
<i>ə̀gjlə̀k-wɔ</i>	( <i>ə̀gjlə̀k</i> )	'the hole'
<i>tlākciĩtũ-wɔ</i>	( <i>tlākciĩt</i> ) <sup>34</sup>	'the cattle'
<i>wũdũ-wɔ</i>	( <i>wũd</i> ) <sup>34</sup>	'the name'
<i>ə̀zgə̀r-wɔ</i>	( <i>ə̀zgə̀r</i> )	'the foot'

In *Dādə̀dgə̀r*, the easternmost Duwai speaking village (which is also the easternmost village of the Bade/Ngizim language group) forms of the PRM with a velar stop are still retained. I did not have a chance to work extensively on this Duwai sub-dialect but I feel confident in assigning the allomorphs of the PRM the following distribution:

(59) ALLOMORPHS OF PRM IN DUWAI (DADƏ̀GƏ̀R)

- kɔ following obstruents (only voiceless and glottal occur finally)
- gɔ following nasals (the nasal assimilates to become -ŋ)
- wɔ elsewhere, i.e. following vowels and non-nasal sonorants

All the examples collected are of the PRM used as a marker of understood object on the verbal noun (cf. top of p. 27 and examples in (46)).

(60) Duwai (Dadə̀gə̀r) PRM

<i>yĩ də̀bɔt-kɔ</i>	( <i>də̀bɔt</i> )	'I will sell (it)'
<i>yĩ pə̀tl-kɔ</i>	( <i>pə̀tl</i> )	'I will dig (it)'
<i>yĩ rə̀sə̀ŋ-gɔ</i>	( <i>rə̀sə̀ŋ</i> )	'I will bury (it)'
<i>y-ākə̀ŋ-gɔ</i>	( <i>ākə̀ŋ</i> )	'I will hear (it)'
<i>yĩ bə̀rũ-wɔ</i>	( <i>bə̀r</i> )	'I will give (it)'
<i>yĩ sɑ-wɔ</i>	( <i>sɑ</i> )	'I will drink (it)'
<i>yĩ mɑasũ-wɔ</i>	( <i>mɑasɑ</i> )	'I will buy (it)'

### 3. ASSOCIATIVE NOUN PHRASES

Bade and related languages, like other African languages, express a wide range of semantic relations in noun phrases of a single construction type. Following Welmers (1963, 1974), this construction type is here called the ASSOCIATIVE construction. Since this paper is mainly concerned with the morphology and syntax of associative constructions, no attempt is made to describe the semantic relations. All the relations listed for Swahili by Welmers (1974:276) and more are possible in Bade, Ngizim, and Duwai.

There is considerable difference among the languages discussed here as regards the complexity of the rules for forming associative phrases. For the most part, simplicity in associative noun phrase grammar corresponds to simplicity in the demonstrative system. This is to

<sup>34</sup>The -u- preceding -wɔ is epenthetic. It is needed to break up the impossible sequence of non-velar obstruent + sonorant.

be expected since the associative system is part of the larger determiner system and all parts of this system are closely interrelated.

An associative construction has two constituents. Typically, these will be two nouns, which we might call  $N_1$  and  $N_2$ . However, one or both the constituents may be something other than a noun, so the two constituents will here be labelled  $A_1$  and  $A_2$ . In order to describe all the variations in associative constructions, different categories of constituents must be distinguished under  $A_1$  and  $A_2$ . The maximum set of categories which must be distinguished in any language for  $A_1$  is given in (61), the maximum set for  $A_2$  in (62):

- (61) CATEGORIES RELEVANT TO  $A_1$
- |  |   |   |
|--|---|---|
| Feminine nouns (FN)                              | } | grammatical gender and/or number are relevant to associative syntax |
| Non-feminine nouns (MN)<br>(masculine or plural) |   |   |
| Inalienable nouns (IN)                           | } | grammatical gender and number are irrelevant to associative syntax  |
| Verbal nouns (VN)                                |   |   |
| Prepositions (Prep)                              |   |   |
- (62) CATEGORIES RELEVANT TO  $A_2$
- |                    |   |   |
|--------------------|---|---|
| Common noun (CN)   | } | all categories of $A_1$ behave the same |
| Specific noun (SN) |   |   |
| 'who?'             |   |   |
| Pronoun (Pro)      |   |   |

The categories of  $A_1$  could actually be reduced to three categories: Masculine/plural, Feminine, and Non-gender. IN, VN, and Prep (the "non-gender" categories) all have the same properties in associative constructions, but since the items included in these categories are semantically so different and play such different syntactic roles, it seems useful to list and illustrate them separately. The category IN is found today only in Bade. Even there it consists of only about five nouns (give or take one or two depending on dialect), usually including 'wife', 'compound', 'hometown', and perhaps a very few others. Furthermore, the IN categorization is relevant only in the singular. Plurals of IN behave like regular MN. IN and VN do have lexical gender, which shows up in pronominal or demonstrative agreement, but it does not play a role in associative phrase syntax.

Only Bade requires that prepositions (Prep) be in associative relation with their complements.<sup>35</sup> Ngizim and Duwai use nouns or independent pronouns as complements of prepositions with no morphological link between them. Even in Bade, not all prepositions form an associative relationship with their complements. For all dialects, 'with' and 'chez' do, and for some speakers, 'without' does. 'At', 'to' and 'from' are never in an associative relation with their complements. These are the only prepositions found in most dialects, with the possible exception of a few words of questionable lexical category such as 'like' and 'only'.

Turning to the categories of  $A_2$  in (62), we can safely say that all nouns other than proper names can function as CN. Thus, although nouns must be distinguished as belonging to the

<sup>35</sup>By "preposition" I mean true prepositions, not locative relational nouns such as 'head' (meaning "on"), 'belly' (meaning "inside"), 'sky' (meaning "above"), etc. Such relational nouns behave like MN or FN, depending on their own lexical gender, e.g. *ʔi ádā-tk-ʔrl* (FN) 'onto it' ('to its head'), *ʔi kúnāa-rl* (MN) 'into it' ('to its belly')

categories FN, MN, IN, and VN when they appear as  $A_1$ , the same nouns appearing as  $A_2$  can all belong to a single category, CN. Depending on contextual circumstances, most of these nouns can potentially function as SN as well in Bade (Ngizim and Duwai have only a single category of nouns in  $A_2$ , which corresponds to CN in Bade).

A watertight definition of what constitutes the category SN has proved elusive. This category is recognized by the fact that it conditions the use of associative linkers which are sensitive to the gender of  $A_1$  (a property shared by associative pronouns and the question word 'who?'). Thus, when  $A_2$  is a CN, all the languages and dialects use a reflex of the invariable associative linker reconstructable as  $*k$ , but when  $A_2$  is a SN in Bade, the associative linker is a reflex of  $*aan$  in constructions where  $A_1$  is a masculine noun and  $*tk$  where  $A_1$  is a feminine noun.<sup>36</sup>

Judging from examples in texts, whether  $A_2$  is a SN or not is determined almost entirely from lexical and/or contextual facts. One category of noun which invariably functions as SN is proper names, e.g. in WB, *kūn-āaŋ* 'Audu's belly' (cf. *kūn-ō-k dūwūn* 'belly of a horse'), *ādhā-tkōŋ Bādē* 'land of the Bade' (< *ādhān* 'land'), or terms of address used like proper names, e.g. *əgv-aaŋ* 'Mom's corpse' (cf. *əgv-ō-k dūwūn* 'corpse of a horse'), *basat-kōŋ Maame* 'your blasted mother's loan'<sup>37</sup> (< *bāsān* 'loan'). There is also a contextually conditioned category of SN in WB, viz. nouns in the definite form (see above, pp. 15 ff.). Thus, in texts, we find examples such as *uur-aaŋ əbjlam* 'the hyena's neck', *ətkwa-tkək dāla* 'the jackal's body' (cf. *uur-ō-ŋ əbjlamən* 'a hyena's neck', *ətkwa-k dālaan* 'a jackal's body' where  $A_2$  has nunation). Such nouns in their definite forms are typically references to characters in a text who have been previously mentioned. One might therefore unify this group of SN with proper names by suggesting that such references are in fact the name given to that character, i.e. we might translate the example just above as 'Hyena's neck' rather than 'the hyena's neck'. This suggestion receives some support from the fact that nouns in the definite form referring to locations do not behave like SN, e.g. *asku-k vārdamu* 'up in (at the top of) the ebony tree' (form before SN would be *asku-tkək* ...), *ii kunu-ŋ maduwa* 'into (the interior of) the house' (form before SN would be *ii kun-aaŋ* ...).<sup>38</sup> Locative nouns used in this way would not be construed as being the name of a place.

Associative constructions using a gender sensitive linker for modern Bade can be described almost entirely as being those constructions which have SN as  $A_2$  (SN in turn being "proper names" defined in a rather general way). Historically it is much more likely that the choice of linker (the gender sensitive  $-aan$  or  $-tk$  as opposed to the general  $k$ ) carried a meaning difference and that this meaning difference could be made with any  $A_2$ . Indeed, it is still possible to use the gender sensitive linkers before what would otherwise appear to be CN. A GB informant accepted the phrases in (63) as both being grammatical, but having different meanings:

<sup>36</sup>The fact that Ngizim and Duwai no longer have grammatical gender clearly is correlated with the fact that they have only a single type of linker and hence no construction type corresponding to that in Bade where  $A_2$  = SN.

<sup>37</sup>This and several of the examples below are taken from texts where tone is not marked.

<sup>38</sup>The word *māamē* 'your mother' is often used in abusive phrases of the form *X-ōŋ māamē* '(to hell with) your damned X'.

<sup>39</sup>The  $A_1$  in the examples are locative "relational" nouns rather than nouns referring to some actual part of  $A_2$ , such as 'LEAVES of the tree', 'DOOR of the house'. This has no bearing on determining whether  $A_2$  is a CN or SN, however, since SN require gender sensitive linkers with any  $A_1$  including relational nouns, e.g. *a-sku-tkōŋ Kəntapo* 'on (at the top of) Kəntapo'.

- (63) a. *s̄aas̄aān kwākwānā* (with gender sensitive linker)  
 'meat of a courtier', i.e. (some) meat which belongs to a courtier
- b. *s̄aas̄ə kwākwānā* (with general linker—allomorph *ə* before *k*)  
 'meat of a courtier', i.e. courtier meat, the type of meat a courtier might choose

A similar kind of meaning distinction exists where *A*<sub>2</sub> is 'who?', which requires a gender sensitive linker, as opposed to 'what?', which always takes the common gender linker.

- (64) (WB) a. *kājlūwāaŋ kē?* 'whose mush?, mush belonging to who?'  
 b. *kājlūwā kəm?* 'mush (made) of what?, what kind of mush?'
- (GB) a. *wānā-tkō kdi?* 'whose work?'  
 b. *wānākəm?* 'what kind of work?' (work of what?)

Pronouns appearing as *A*<sub>2</sub> also require a linker sensitive to the gender of *A*<sub>1</sub>. On analogy with examples (63) and (64) we might expect to find two constructions: one with a gender sensitive linker to give a meaning like 'my house, the house I own', and the other with a general linker meaning 'my (kind of) house, the type of house I like'. In fact no such distinction exists—only the gender sensitive linkers are possible in Bade before pronouns.<sup>40</sup> This seems to be part of the shift of a process which could produce meaning differences such as those in (63) and (64) to a more rigid syntactically determined choice of linkers depending on what *A*<sub>2</sub> is.

There is further evidence that this process has been largely syntactified. We noted that in WB nouns in their definite form usually behave as SN while nouns with nunation do not. In GB and SB, where there is no nunation, nouns which would be rendered as nouns in the definite form in WB do not behave as SN. Thus, a speaker of WB in a certain folktale used the phrase *adā-tkəŋ əbjlām* 'Hyena's head' (*əbjlām* treated as SN). At exactly the same point in the same tale told in SB, the speaker used *adā-ŋ əbjlām* 'Hyena's head' with the general linker (which has the allomorph *ŋ* before vowels).

WB, SB, and GB all use a linker sensitive to the gender of *A*<sub>1</sub> if *A*<sub>2</sub> is a proper name. That proper names might be singled out for special syntactic treatment is not surprising—this is a special syntactic category in other languages as well. Of interest here is the fact that WB, which linguistically marks a repeated reference to a certain character in a narrative, uses that marking to trigger the use of the gender sensitive linker. SB and GB do not linguistically differentiate the first reference from repeated references to a given character, and likewise they do not differentiate the type of linker used with the first or repeated references. They use only the general linker in all cases.<sup>41</sup> If the use of the gender-sensitive linker as opposed to the general linker carried some meaning difference, we would either expect to find both linkers in all types of associative constructions,<sup>42</sup> or if the

<sup>40</sup>Comparative evidence from Ngizim suggests that a general linker was used before pronouns as *A*<sub>2</sub> at one time. No persons in Ngizim show anything like the modern Bade gender sensitive linkers, but some persons do show a reflex of simple *\*k* (see section 3.4).

<sup>41</sup>Recall that it was a GB speaker who gave the examples in (63). On the basis of an examination of several dozen pages of text, it is evident that the meaning distinction given there is rarely exploited and is undoubtedly being lost. It should be noted that this particular speaker was in his mid-thirties and prided himself on knowing "old Bade" [Hausa *Bade na daa*].

<sup>42</sup>There are occasional examples of the general linker being used where a gender sensitive

choice of linker type were heavily determined by extra-linguistic context we would at least expect to find all dialects sharing the same linker in the same contexts. We do not. In fact, with the exception of use before proper names and pronouns, two easily defined lexical categories, the use of the gender sensitive linker has virtually been eliminated except in the one dialect which has an overt morpho-syntactic signal to require its presence.

Before continuing with specific synchronic descriptions, a few speculations about the origin of the gender-sensitive linkers are in order. Evidence within the Bade group suggests that the reconstructed linkers *\*-aan* and *\*-thu* were markers of definiteness on masculine and feminine nouns respectively. They closely resemble the modern GB masculine "distant" demonstrative and feminine "near" demonstrative (cf. (12)) as well as other demonstratives found here and there. These markings for definite nouns in proto-Bade were reinterpreted as special associative linkers and were cut loose from the rest of the demonstrative system. This is evidenced by the fact that the gender sensitive linkers do not have direct morphological correspondants in the demonstrative system of any modern Bade dialect. To see this one need only compare the modern linkers, which closely resemble the reconstructed linkers in all dialects, to the modern demonstrative systems given in sections 1.1-1.3. As hypothesized above, in proto-Bade the choice of gender-sensitive linkers as opposed to general linker was not restricted by the category of  $A_2$ . I suggest that the modern restriction of the gender-sensitive linker to use before SN is a result of the numerical preponderance of definite nouns over indefinite nouns in the environment now characterized as "pre-SN." I claimed above that the gender-sensitive linkers are historically markers of definiteness. The category of nouns I have labelled SN (proper names, nouns in the definite form) as well as pronouns are necessarily definite.<sup>43</sup> Simply counting associative constructions where  $A_2$  is definite, it is certain that there would be far more constructions where  $A_1$  is definite than where it is indefinite, i.e. a phrase like 'THE land of THE Bade' would be far more likely to occur than 'A land of THE Bade'. (I hesitate to make any such prediction for phrases where  $A_2$  is indefinite though phrases like 'A farm of A man' seem easier to find a context for than 'THE farm of A man').

With reinterpretation of these definite markers as associative linkers and the loss of identity with other demonstratives because of morphological changes in the demonstrative system, speakers began to rely on the numerical correlations just mentioned for correct choice of associative linker. The result has been syntactification of the three forms of the linker.

In the descriptions that follow, each sub-section will take one type of  $A_2$  and hold it constant, describing the syntax of associative constructions for each type of  $A_1$  before that  $A_2$ .

### 3.1. Gashua Bade

#### 3.1.1. $A_2$ = Associative Pronoun

In the demonstrative system, the westerly GB speaking villages resembled SB more than GB of Gashua and neighboring villages. In associative noun phrases, however, all of GB functions alike and differs in some respects from SB.

linker would be expected. However, in the examples I have found there is nothing to suggest that the meaning would be more like the (b) cases of (63) and (64) than the (a) cases. I suggest that such examples presage the eventual replacement of the gender-sensitive linker by the numerically more frequently appearing and grammatically simpler general linker.

<sup>43</sup>The question word 'who?' is a SN in modern Bade, though question words are the epitome of indefinite words. However, a question with 'who?' normally expects a definite noun in the answer: Q: 'whose cow?', A: 'Elmer's cow'. The question word 'what?' is not a SN, but 'what?' in associative constructions does not expect a definite noun in the answer, especially as used in Bade where it means 'what kind of ...?' (cf. the examples in (64)).



The associative pronouns of GB, along with the types of linker they are used with, are displayed in (65):

(65)	a. A <sub>1</sub> is MN	b. A <sub>1</sub> is FN	c. A <sub>1</sub> is IN, VN, Prep	d. Independent
1sg.	-(aa)ɛn-āa(nāi)	-tkɛāa(nāi)	-āa(nāi)	kāa(nāi)
2m.sg.	-(aa)ɛn-īi	-tkɛīi	-āa-gīi	kāagīi
2f.sg.	-(aa)ɛn-ēm	-tkɛēm	-āa-gēm	kāagēm
3m.sg.	-(aa)ɛlī	-tkɛlī	-āa-lī	kāalī
3f.sg.	-(aa)ɛlā	-tkɛlā	-āa-lā	kāalā
1pl.ex.	-(aa)ɛn-jā	-tkɛjā	-āa-jā	kāajā
1pl.in.	-(aa)ɛn-gwā	-tkū-wā/-gwā	-āa-wā/-gwā	kāagwā
2pl.	-(aa)ɛwūn	-tkū-wūn	-āa-wūn	kāawūn
3pl.	-(aa)ɛn-sī	-tkɛsī	-āa-kīi	kāaksī

The pronouns themselves differ little if at all from one paradigm to the next (though attention is drawn to the second persons singular and the third person plural). The parenthesized (nāi) in first person singular is optionally present for all paradigms. Paradigms (65a and b) go together in that they are the forms used when A<sub>1</sub> is gender marked. Paradigms (65c and d) are used when gender of A<sub>1</sub> is not relevant to the associative construction. Actually, (65d) could be considered a sub-case of (65c) where A<sub>1</sub> is the independent associative marker *ka-*.

The high tone preceding the masculine linker in the (65a) paradigm falls on the syllabic segment immediately preceding the pronoun. What that syllabic will be is determined by the following conditions:

(a) If A<sub>1</sub> is a masculine noun ending in a vowel, that vowel is replaced by long -aa- (given in parentheses in (65a)) and high tone falls on -aa-, e.g. *kūn-āa-lī* 'his belly' < *kūnū*.

(b) If the noun ends in a consonant and requires an epenthetic vowel, the high tone falls on the epenthetic vowel, e.g. *ūgzɛf-ɛ-lī* 'his slave' < *ūgzɛf*; *wūd-ɛ-n-gwā* 'our name' < *wūd*.

(c) If the noun ends in a consonant which can occur in immediate sequence with the following consonant without an epenthetic vowel, the high tone falls on the last syllable of the noun, e.g. *wūn-n-lī* 'your (m.sg.) son' < *wūn*.

(d) An underlying low tone syllable which begins in a voiced obstruent cannot be raised to high.<sup>44</sup> If such a syllable immediately precedes an associative pronoun, it is realized with rising tone, e.g. *kāgīi-lī* 'his land' < *kāgāi*.

<sup>44</sup>Voiced obstruents are incompatible with high tone in Bade as a general rule. When a morphophonemic process seeks to supply high tone to an underlyingly low tone syllable beginning in a voiced obstruent, a conflict arises. This conflict is resolved in different ways depending on environment: following a high tone and preceding a low, the syllable in question will have a rising tone or a downstep (generally the rising tone will occur on a long syllable, downstep on a short); preceding a high tone, the syllable in question may not be affected at all. Note that the vowels on which the high tone falls in cases (a) and (b) have no tone of their own so this tonal conflict will not arise, even if the syllable with high tone begins in a voiced obstruent.

Constructions where the pronoun follows a feminine noun also have a high tone before the pronoun, but this high tone never falls on any vowel preceding the feminine linker *-tk-*:

(a) If the pronoun itself begins in a vowel (or is only a vowel) the pronoun takes a falling tone, e.g. *dīkwā-tk-īi* 'your (m.sg.) mare' < *dīkwā*; *āḍāakfō-tk-īi* 'your (m.sg.) knee' < *āḍāakfū*.

(b) If the pronoun begins in a consonant, an epenthetic *-ə-* intervenes between linker and pronoun and this vowel takes the high tone, e.g. *dīkwā-tkə-lī* 'his mare'; *āḍāakfō-tkə-lī* 'his knee'.

In (65) all the pronouns are shown with low tone. In actual pronunciation, all those pronouns not beginning in a voiced obstruent frequently have a falling tone. This is a result of an extension of rule (2), TONE RAISING, in GB (and to a less noticeable extent in some other areas). As stated, rule (2) raises a low tone only when it is not prepausal. GB now has the tone raising rule (2'):

(2') GB TONE RAISING

Lo → { a. Fall / Hi \_\_#, e.g. /ākā/ → [ākā] 'fire'  
b. Hi / Hi \_\_ elsewhere

Condition: The Lo syllable does not begin in a voiced obstruent.

Not all speakers of GB apply the (a) part of (2') with equal noticeableness or consistency. The examples in (66) are as found in my notes, where I marked tones phonetically to the best of my hearing:

(66) a. A<sub>1</sub> = MN

<i>kūnū</i> 'belly'	<i>mīyā</i> 'mouth'	<i>kōgāi</i> 'land'	<i>wūd</i> 'name'
<i>kūnāanā</i>	<i>mīyāanəm</i>	<i>kōgīinīi</i>	<i>wūdālī</i>
<i>kūnāanjā</i>	<i>mīyāansī</i>	<i>kōgīinīngwā</i>	<i>wūdōnsī</i>
<i>ūgzōf</i> 'slave'	<i>dōonāk</i> 'zana-mat'	<i>wūn</i> 'son'	<i>ūktlū</i> 'cattle'
<i>ūgzōfōnīi</i>	<i>dōonākālī</i>	<i>wūllī</i> <sup>45</sup>	<i>ūktlāanda</i>
<i>ūgzōfōnjā</i>	<i>dōonākōngwā</i>	<i>wūnūwūn</i>	<i>ūktlāanīi</i>
			<i>ūktlāalī</i>
			<i>ūktlāanjā</i>

<sup>45</sup>In GB, *n* → *l* / \_\_ *l*.

āfī 'father' <sup>46</sup>	māi 'mother'	kāzā 'hen'	āmī 'arm'
āfōtkāa	mīitkīi	kāzātkāanāi <sup>47</sup>	āmōtkāa
āfōtkūwūn	mīitkōjā	kāzātkōksī	āmōtkīi
			āmōtkālī
			āmōtkūwūn

The categories Inalienable Noun (IN), Verbal Noun (VN), and Preposition (Prep) occur in associative phrases with the constructions in (65c), i.e. those which are not gender marked for A<sub>1</sub>. Presumably the long -āa- in the constructions of (65c) has the same conditioning as that in (65a), viz. it replaces the final vowel of A<sub>1</sub>. The pronouns of (65c) never appear without this -āa- since all the words in the categories requiring this construction happen to end in a vowel.

The following nouns belong to the category IN in GB: āmā 'wife' (f.), bā 'co-wife' (f.), dāa '(home)town' (m.), sōolāk 'in-law' (m. or f.), ṅgwā 'household' (m.), dāam- 'alone'. The last word, used in constructions such as ācī dāamāalī 'he alone, him all by himself', perhaps should not be considered a noun at all, though it doesn't obviously fit any other well-established category. It is used only with a noun or independent pronoun preceding and the corresponding associative pronoun attached. The word ṅgwā is also used only with an overt A<sub>2</sub>, noun or pronoun. The other words can all be used as free nouns.

The only prepositions whose complements are in an associative construction with them are gā 'at the place of, in the presence of, chez' and dā 'with'.<sup>48</sup>

<sup>46</sup>Usually natural gender corresponds to lexical gender. The word 'father' shows, however, that gender must be considered a lexical category, now largely predictable from phonological shape in GB (vowel final nouns are usually feminine). Interestingly, while the gender for 'father' is determined by phonological shape, that for 'mother', māi, is determined by natural gender (most nouns ending in a diphthong are masculine).

<sup>47</sup>The word for 'hen' is underlyingly /kāzā- (cf. Ngizim [gāazā]). The derivation for 'my hen' is as follows:

	/kāzā-tk-āanāi/
TONE RAISING	kāzā-tk-āanāi
TONE ABSORPTION	kāzā-tk-āanāi
TONE LOWERING	[kāzā-tk-āanāi]

<sup>48</sup>There are several prepositions besides these two: gōo 'without', dā 'from', īi 'to', a(a) 'at'. Gōo takes independent pronouns as complements, e.g. gōo gīi 'without you', gōo cī (</gōo ācī/) 'without him'. The preposition īi when used to mark dative objects has a special pronoun paradigm where the first person singular looks like the associative pronouns but the remainder are like the independent pronouns: īyāa(nāi) 'to me', īigīi 'to you (m)', īigām 'to you (f)', ēecī < \*īi ācī 'to him', ēetū < \*īi ātū 'to her', īijā 'to us (excl.)', īi(g)wā 'to us (incl.)', īiwūn 'to you (pl.)', ēksī < \*īi āksī 'to them'. Dā 'from', a(a) 'at', and īi 'to' (in the locative sense) cannot be directly followed by a pronominal complement. Either the preposition gā or some locational noun such as kūnū 'inside', ādā 'on top of', etc. must intervene.

(67) a.  $A_1 = \text{IN}$ 

ṅgwā	'household'	bā	'co-wife'	dāa	'town'	sōlāk <sup>49</sup>	'in-law'
ṅgwāanāi		bāanāi		dāajā		sōlāa	
ṅgwāagī		bāagēm		dāawūn		sōlāagī	
ṅgwāawā		bāajā		dāaksī		sōlāagēm	
ṅgwāajā						sōlāalī	
ṅgwāaksī						sōlāalā	

b.  $A_1 = \text{VN}$ 

ācī āabdāa	(ābdā)	'he will ask me'
ācī āabdāagī		'he will ask you (m.sg.)'
ācī āabdāalī		'he will ask him'
ācī ā gēfāagēm (gēfī)		'he will catch you (f.sg.)'
ācī ā gēfāagwā		'he will catch us (incl.)'
ācī ā gēfāaksī		'he will catch them'

c.  $A_1 = \text{Prep}$ 

gā	'in the presence of'	dē	'with'
āksī dāa īi gāa	'they came to me'	dāa(nāi)	
" īi gāagī	' " to you'	dāagī	
" īi gāalī	' " to him'	dāalī	
" īi gāagwā	' " to us'	dāagwā	
" īi gāaksī	' " to them'	dāaksī	

As noted in the introduction to this section, the category IN applies only to singular nouns. The nouns in (67a), when used in the plural, take the associative construction of (65a), not (65c): āmātēnjā 'our wives' (āmāt), dāaksēsēnēnsī 'their home towns' (dāaksēsēn), sōlālēgēnnī 'your (m.sg.) in-laws' (sōlālēgēn).

One further morpheme, if followed by a pronominal complement, requires the constructions of (65c). This is the morpheme -dū (underlyingly two different morphemes with a single surface realization) which a) converts basic intransitive verbs to transitive and b) obligatorily appears on a small number of verbs, where it is a vestige of an old TOTALITY EXTENSION, no longer productive in Bade. When a verb has this suffix, a pronoun complement must be in the associative construction in all verb aspects, but a noun complement is not in the associative construction with it in any aspect.

<sup>49</sup>The behavior of sōlāk is unique in a number of ways: (a) The final -k disappears when the noun is in an associative construction with a pronoun. Most nouns in GB no longer follow this KAFATION pattern (cf. fn. 33). (b) When the associative pronoun is singular, the constructions of (65c) are used. If the pronoun is plural the constructions of (65a), normally used only when  $A_1 = \text{MN}$ , are used. This is the case no matter whether sōlāk has a masculine or feminine referent, e.g. sōlāanjā 'our father- or mother-in-law', sōlāansī 'their father- or mother- in law'. (c) Some speakers now use sōlāk as a normal noun of masculine lexical gender, e.g. sōlākēnjā 'our father- or mother-in-law', sōlākēnsī 'their father- or mother-in law'.

(68) a.  $A_1$  is -dũ the transitizer

à jōdũ 'take (it)!' (sg. imperative) (cf. à jĩ 'go!')

à jōdāa 'take me!'

à jōdāalĩ 'take him!'

à jōdō dām 'take wood!'

b.  $A_1$  is -dũ the totality extension

ācĩ ðbzōdũ 'he left (it)' (cf. ācĩ ðbzũ 'he put (it) down')

ācĩ ðbzōdāagĩ 'he left you'

ācĩ ðbzōdāagwā 'he left us'

ācĩ ðbzōdō dām 'he left wood'

3.1.2.  $A_2$  = Common Noun (CN)

Associative constructions composed of  $A_1$  of any category plus a CN as  $A_2$  always have the form  $A_1$  - /k/  $A_2$ . Examples of each type of  $A_1$  plus CN as  $A_2$  are given in (70a-e). While the basic statement is quite simple, the phonetic realization of such associative constructions requires a complex set of rules, given in (69a-e). These rules are to be applied in the order given.

(69) Rules for  $A_1$  - /k/ CN in GB

a. EPENTHESIS I

$$\emptyset \rightarrow \text{ə} / k \text{ --- } \left[ \begin{array}{c} C \\ +\text{obst} \\ \{ +\text{voice} \} \\ \{ +\text{glot} \} \end{array} \right] V (C) \#$$

(Epenthetic ə is inserted after the linker before a monosyllable beginning in a voiced or glottalized obstruent.)

/āyā ḳ dām/ → [āyā ḳ dām] 'the weed *Spermacoce stachydea*'  
(lit: seeds of wood)

/lāmā ḳ dān/? → [lāmā ḳ dān]? 'what kind of speech?'  
(lit: speech of where?)

b. /k/ REALIZATION

$$/k/ \rightarrow \begin{cases} \text{(i)} & \emptyset / \text{ --- } [+ \text{velar}] \\ \text{(ii)} & g / \text{ --- } \left[ \begin{array}{c} +\text{obst} \\ +\text{voice} \end{array} \right] \\ \text{(iii)} & (\text{opt}) \eta / \text{ --- } [+ \text{nasal}] \\ \text{(iv)} & k \text{ elsewhere, i.e. before voiceless and glottalized obstruents, vowels, liquids, and optionally before nasals} \end{cases}$$

(See examples in (70).)

C. EPENTHESIS II<sup>50</sup>

$\phi \rightarrow \text{ə} / C \text{ \_\_\_\_ } [+velar] \# C$

(When  $A_1$  ends in a consonant,  $A_2$  begins in a consonant, and the linker is realized as other than  $\phi$  (cf. (69b(i)) above), the three consonant sequence is broken up by inserting an epenthetic ə before the linker.)

/yàt k' sǎgvà/ → ['yàt-ək sǎgvà] 'feathers of a goose'  
 /ùgzǎf k' Bàrnáu/ → [ùgzǎf-ək Bàrnáu] 'slave of Barno'

## d. TONE SHIFT

The floating high tone of /k'/ is transferred to the first vowel to the right except in / \\_\\_\\_\\_ [+obst] V, where it is shifted to the left.

/wúnyà k' ǎgdǎm k' dǎa/ → [wúnyà-k ǎgdǎm kǎ dǎa] 'the daughter of the chief of the town'  
 /ùgzǎf k' Bàrnáu/ → [ùgzǎf-ək Bàrnáu] 'slave of Barno'

## e. General tone rules (2') (p. 40) and (3)

(70) a.  $A_1 = MN, A_2 = CN$

'yàt		'hair; feathers'
'yàt kǎ tlǎ	(tlǎ)	'hair of a cow'
'yàtǎg dūuzǎ <sup>51</sup>	(dūuzǎ)	'feathers of an owl'
'yàtǎk dǎitǎ	(dǎitǎ)	'feathers of a bird'
'yàtǎg mǎsǎnǎ	(mǎsǎnǎ)	'hair of a mongoose'
'yàt kwǎm	(kwǎm)	'hair of a bull'
'yàt k-ǎbjǎm	(ǎbjǎm)	'hair of a hyena'
'yàt k-ǎkū	(ǎkū)	'hair of a goat'
'yàt k-ǎmǎt	(ǎmǎt)	'hair of women'

<sup>50</sup>The way EPENTHESIS I and EPENTHESIS II are stated may be incorrect in minor details. First, it may be that EPENTHESIS I rather than EPENTHESIS II applies to break up a three consonant sequence before monosyllables, e.g. 'yàt kǎ tlǎ 'hair of a cow' rather than the expected \*'yàt-ək tlǎ. Note also the construction 'yàt kǎ tǎmǎkú 'hair of a sheep', rather than the expected \*'yàt-ək tǎmǎkú. However, there is independently justified reason to believe that the word for 'sheep' could be analyzed as underlying /ǎt(ǎ)mǎkú/, meaning that it has an initial vowel and would not be affected by either epenthesis rule.

<sup>51</sup>In this and several other examples below, e.g. 'yàt-k ǎmǎt 'hair of women', the effect of the floating high tone of /k'/ is wiped out by rule (3), TONE LOWERING. Thus, 'yàtǎg dūuzǎ has the following derivation:

	/yàt k' dūuzǎ/
/k'/ REALIZATION and	
EPENTHESIS II	'yàt-ǎg dūuzǎ
TONE SHIFT	'yàt-ǎg dūuzǎ
TONE LOWERING	['yàtǎg dūuzǎ]

## (70) a. (cont.)

<i>kūnū</i>	'belly'
<i>kūnək tlā</i>	'belly of a cow'
<i>kūnəg dūuzi</i>	'belly of an owl'
<i>kūnək dīitā</i>	'belly of a bird'
<i>kūnək māsānā</i>	'belly of a mongoose'
<i>kūnə kwām</i>	'belly of a bull'
<i>kūnə k-əbjlōm</i>	'belly of a hyena'
<i>kūnə k-ākū</i>	'belly of a goat'

b.  $A_1 = \text{FN}$ ,  $A_2 = \text{CN}$ 

<i>dā</i>	'eye'
<i>dāk tlā</i>	'eye of a cow'
<i>dāg dūuzi</i>	'eye of an owl'
<i>dāk dīitā</i>	'eye of a bird'
<i>dāj māsānā, dāk māsānā</i>	'eye of a mongoose'
<i>dā kwām</i>	'eye of a bull'
<i>dā k-əbjlōm</i>	'eye of a hyena'
<i>dā k-ākū</i>	'eye of a goat'
<i>dā k-āmāt</i>	'eye of women'

c.  $A_1 = \text{IN}$ ,  $A_2 = \text{CN}$ 

<i>āmāk cīipōnā</i> ( <i>cīipōnā</i> )	'wife of a namesake'
<i>āmā kwākwānā</i> ( <i>kwākwānā</i> )	'wife of a courtier'
<i>ṛgwāk māzām</i> ( <i>māzām</i> )	'household of a blacksmith'
<i>ṛgwāg dūngūm</i> ( <i>dūngūm</i> )	'household of a leper'

d.  $A_1 = \text{VN}$ ,  $A_2 = \text{CN}$ 

<i>əbdā</i>	'asking'
<i>nāabdāj māzām</i>	'I will ask a blacksmith'
<i>nāabdāg dūngūm</i> <sup>52</sup>	'I will ask a leper'
<i>nāabdā kwākwānā</i>	'I will ask a courtier'
<i>gəḡi</i>	'catching'
<i>nā gəḡək tlā</i>	'I will catch a cow'
<i>nā gəḡəṛ māsānā</i>	'I will catch a mongoose'
<i>nā gəḡə kwām</i>	'I will catch a bull'

<sup>52</sup>If the rules in (69) are applied, these examples should have the tones \**nāabdāg dūngūm* and \**dāg dābī*. I may have mistranscribed them or the tone rules may be incorrect in some details. Note in particular that the syllable which should take the floating high tone begins in a voiced obstruent in both cases.

(70) (cont.)

e. A<sub>1</sub> = Prep, A<sub>2</sub> = CN

<i>gàŋ mǎzām</i>	'place of a blacksmith'
<i>gāk tlā</i>	'place of a cow'
<i>dəg dābɿ</i> <sup>52</sup>	'with a hoe'
<i>də kwākwanā</i>	'with a courtier'

If A<sub>1</sub> is not overtly expressed or is separated from A<sub>2</sub> by some intervening material, A<sub>2</sub> is preceded by *kā/k/* 'that of'

<i>kāk tlā</i> <sup>53</sup>	'that of a cow'
<i>kāŋ māgǎlǎf</i> (māgǎlǎf)	'that of a stranger'
<i>kā kwām</i>	'that of a bull'
<i>kāk ākū</i>	'that of a goat'
<i>kəgɿiwū ŋkǎu kāk ānəm</i> earth-the this that-of masonry	'this earth for masonry'
<i>dəmāanī kāk ākǎwǎ</i> wood-this that-of fire-the	'this wood for the fire'
<i>səsuulǐ kǎŋ māglǎlvən</i> hut-his that-of guests	'his guest house'

### 3.1.3. A<sub>2</sub> = Specific Noun (SN) or 'who?'

I went to some pains in the introductory remarks of section 3 to delimit the category SN. Examples in this section and the corresponding sections for other dialects will all use proper names and the word 'who?', which for GB in associative constructions has the underlying form /kǎi/.<sup>54</sup>

If A<sub>1</sub> is FN or MN and A<sub>2</sub> is SN, the general linker /k'/ is not used. Instead, the special linking constructions in (72) are required:

(72) A <sub>1</sub> = MN	A <sub>1</sub> = FN
(-āa)-n	-tkǎ-/k/

This will be recognized as being identical to the linking constructions used with pronouns after MN and FN with the exception that constructions where A<sub>1</sub> is FN require the linker /k'/ before SN in addition to the feminine linking morpheme -tkǎ-. The realizations of /k'/ are those given in (69a-e).

<sup>53</sup>The tones here were rechecked and are correct to the best of my hearing. No rules given in the present article explain them.

<sup>54</sup>In proto-Bade, the word 'who?' must have been \*ǎi, but the linker *k* was reanalyzed as part of this word and now cannot be separated from it in associative constructions. The same is true of *kəm* 'what?', which originally was \*mǎ, and in fact still has that shape in Duwai.



(73) a.  $A_1 = \text{MN}, A_2 = \text{SN}$ 

<i>kūnū</i> 'belly'	<i>sāasī</i> 'meat'	<i>'yāt</i> 'hair'
<i>kūnāan Cāakwā</i>	<i>sāasāan Tāavī</i>	<i>'yātōn Zābā</i>
<i>kūnāan Mūuzā</i>	<i>sāasāan Kābdu</i>	<i>'yātōn Kābdu</i>
<i>kūnāan Kābdu</i>	<i>sāasāan kái?</i>	<i>'yātōn kái?</i>
<i>kūnāan kái?</i>		

b.  $A_1 = \text{FN}, A_2 = \text{SN}$ 

<i>dā</i> 'eye'	<i>ākū</i> 'goat'
<i>dātkōk Cāakwā</i>	<i>ākūtkōk Zābā</i>
<i>dātkōk Mūuzā</i>	<i>ākūtkōk Gārējāakū</i>
<i>dātkōk Zābā</i>	<i>ākūtkōk kái?</i>
<i>dātkō kái?</i>	

For IN, VN, and Prep, i.e. those categories of  $A_1$  where gender is irrelevant for associative constructions, the general linker /k~/ is used before SN just as before CN.

(74) a.  $A_1 = \text{IN}, A_2 = \text{SN}$ 

<i>ṅgwāk Jāajī</i>	'Jaji's household'
<i>ṅgwā Kābdu</i>	'Kabau's household'
<i>ṅgwā kái?</i>	'whose household?'
<i>āmā Kābdu</i>	'Kabau's wife'
<i>āmā kái?</i>	'whose wife?'

b.  $A_1 = \text{VN}, A_2 = \text{SN}$ 

<i>nīi vā māakāk Jāajī</i>	'I'm looking for Jaji'
<i>nīi vā māakā Kābdu</i>	'I'm looking for Kabau'
<i>gīi vā māakā kái?</i>	'who are you looking for?'

c.  $A_1 = \text{Prep}, A_2 = \text{SN}$ 

<i>dēg Jāajī</i>	'with Jaji'
<i>dē Kābdu</i>	'with Kabau'
<i>dē kái?</i>	'with whom?'

### 3.2. Western Bade

#### 3.2.1. $A_2 = \text{Associative Pronoun}$

The associative pronouns of WB, along with the types of linker they are used with, are displayed in (75a-d):

(75) a. A <sub>1</sub> is MN or Prep in mid-V	b. A <sub>1</sub> is FN	c. A <sub>1</sub> is IN, VN, or gā-	d. Independent
1sg. -ŋ-āa(nē)	-tk-āa(nē)	-āanē	(ŋ) kāanē
2m.sg. -ŋ-īi	-tk-īi	-āa-ī	(ŋ) kāai
2f.sf. -ŋ-ōm	-tk-ōm	-āa-m	(ŋ) kām
3m.sg. -rī	-tkō-rī	-āa-rī	(ŋ) kārī
3f.sg. -rā	-tkō-rā	-āa-rā	(ŋ) kārā
1pl.ex. -n-jā	-tkō-jā	-āa-jā	(ŋ) kājā
1pl.in. -ŋ-gwā	-tkū-wā	-āa-wā	(ŋ) kāawā
2pl. -wūn	-tkū-wūn	-āa-wūn	(ŋ) kāawūn
3pl. -kcī	-tkō-kcī	-āa-kcī	(ŋ) kākī

The pronouns in (75) are used in villages along the eastern edge of the WB area. Other WB villages use forms which are segmentally identical but have low tone on all but first person singular.<sup>55</sup> The optional nasal prefix in (75d) is another characteristic of the more westerly WB villages, but it doesn't appear to be obligatory anywhere.

The paradigms of (75a and b) are suffixed to the citation stem with nunation deleted. In WB, then, there is no need to specify -aa- or the tone preceding the pronouns as one must for GB (cf. 3.1.1) since this is already known from the citation form of the noun. Phrase final after high tone, the pronouns marked with high tone usually sound as if they have a downstep. This is probably a phrase final intonation phenomenon with no structural import (cf. fn. 19). In examples below, I have marked high or downstep as they appear in my field notes. Many of the examples also show the result of (3), TONE LOWERING, before the high tone pronouns. In WB, TONE LOWERING does not apply to syllables beginning in a voiceless obstruent.

(76) a. A<sub>1</sub> = MN

kūnāan/kūnāan 'belly' <sup>56</sup>	zāyāan 'rope'	pōbātōn 'ashes'
kūnāanjāa	zāyāanjīi	pōbātōkci
kūnāangwā	zāyāanjā	pōbātōngwā
ōzgōrōn 'foot'	ōktlāan 'cattle'	sūwānōn 'dream'
ōzgōrōrī	ōktlāanjāa	sūwānōnjāa
ōzgōrōnjā	ōktlāanjīi	sūwānōnjlī
ōzgōrōkci	ōktlāarl	sūwānōngwā
	ōktlāanjā	sūwānōkcl
	ōktlāawūn	
	ōktlāakcl	

<sup>55</sup>The tones in (75) have been recorded for the villages of Amshi, Kunu, Daciya, Dakona, and Bəzi. This tonal difference in pronouns is also found in direct and indirect objects. R. Lukas (1968:110) gives a tone pattern for the associative paradigm which is different from any pattern that I have observed.

<sup>56</sup>In citation form the word for 'belly' is clearly kūnāan and other dialects all have kūnū. Yet, in WB, whenever this word enters into a construction with some following morpheme, the initial syllable is high.

b.  $A_1 = \text{FN}$

<i>ākān</i> 'fire'	<i>dān</i> 'eye' <sup>57</sup>	<i>tāmākūn</i> 'sheep'	<i>mārān</i> 'beard'
<i>ākātkāa</i>	<i>dātkīi</i>	<i>tāmākūtkām</i>	<i>mārātkāa</i>
<i>ākātkōjā</i>	<i>dātkōrī</i>	<i>tāmākūtkōrd</i>	<i>mārātkīi</i>
<i>ākātkōkcl</i>		<i>tāmākūtkūwā</i>	<i>mārātkōrl</i>

WB has two prepositions ending in mid-vowels which require that their complements be in associative construction with them: *dēe-/nee-* 'with' and *goo-* 'without'. These take the  $A_1 = \text{MN}$  form of the linker:

(76) c.  $A_1 = \text{Prep in mid-vowel}$

<i>dēe-</i> 'with'	<i>goo-</i> 'without'
<i>dēenāa</i>	<i>goonāa</i>
<i>dēenīi</i>	<i>goonīi</i>
<i>dēerl</i>	<i>goorl</i>
<i>dēnjā</i>	<i>goonjā</i>

The following nouns belong to the category IN in WB: *āmān* 'wife' (f.), *āmāngwān* 'co-wife' (f.), *dāan* '(home)town' (f.),<sup>58</sup> *sūwārāan* 'in-law' (m.), *sūwārān* 'in-law' (f.), *ṛgwāa-* 'household' (f.), *dāamāa-* 'alone'. The latter two never appear without associative complements.

Only one preposition, *ga-* 'in the presence of, chez', uses the constructions of (75c) for its complements.

<sup>57</sup>The tone of a monosyllabic noun stem beginning in a voiced obstruent is lowered before high tone associative pronouns, e.g. *bēethāa* 'my thing', *bēethārl* 'his thing' (< *bēn* 'thing'). But note the following, where the noun stem does not begin in a voiced obstruent: *sātkli* 'your bottom', *sātkārl* 'his bottom' (< *sān* 'bottom'), *rēenāa* 'my place', *rēenīi* 'your place' (< *rēn* 'place'). The prepositions *dēe* 'with' in (76c) and *ga* 'in the presence of' in (77c) follow the same tone pattern as nouns. I have recorded the preposition *goo* 'without' in (76c) as always having high tone.

<sup>58</sup>The word *dāan* '(home)town' is the only feminine word in WB with a long -aa- as stem vowel. This word is masculine in GB, but it is also unusual there and in Ngizim in that it has a long vowel. Nearly all nouns in those dialects end in short vowels.

<sup>59</sup>In addition to *ga* 'in the presence of', *dēe/nee* 'with', and *goo* 'without', WB has the following prepositions: *dā* 'from', *ii* 'to', and *a(a)* 'at'. As in GB (cf. fn. 48), none of these takes associative complements and only *ii* used as a dative object marker can directly take pronoun complements. The WB dative pronoun constructions are *īyāa(nē)* 'to me', *īigīi* 'to you (m.sg.)', *īigām* 'to you (f.sg.)', *īicī* 'to him', *īitū* 'to her', *īijā* 'to us (excl.)', *īiūw* 'to us (incl.)', *īiūn* 'to you (pl.)', *īikcī* 'to them'.

(77) a.  $A_1 = \text{IN}$ 

<i>dāan</i>	'(home)town'	<i>āmān</i>	'wife' <sup>60</sup>	<i>āmānguān</i>	'co-wife'
<i>dāanē</i>	<i>dāajà</i>	<i>āmāanē</i>		<i>āmānguāanē</i>	
	<i>dāawà</i>	<i>āmāai</i>		<i>āmānguāam</i>	
<i>dāai</i>	<i>dāawūn</i>	<i>āmāarl</i>			
<i>dāam</i>					
<i>dāarl</i>	<i>dāakcl</i>				
<i>dāard</i>					

<i>sūwārāan</i>	(m.), <i>sūwārān</i>	(f.)	'in-law' <sup>61</sup>
<i>sūwārāanē</i>	(m. or f.)		
<i>sūwārāai</i>	(m. or f.)		
<i>sūwārāari</i>	(m. or f.)		

b.  $A_1 = \text{VN}$ 

<i>əbdān</i>	'asking'
<i>nāabdāam</i>	'I will ask you (f.sg.)'
<i>yāabdāari</i>	'you will ask him'
<i>yāabdāajà</i>	'you will ask us'
<i>gəfən</i>	'catching'
<i>yā gəfāanē</i>	'you will catch me'
<i>nā gəfāai</i>	'I will catch you (m.sg.)'
<i>nā gəfāarl</i>	'I will catch him'

c.  $A_1 = \text{the Prep } ga-$ 

<i>ākcl jàa i</i>	<i>gāanē</i>	'they came to me'
"	<i>i gāai</i>	'they came to you (m.sg.)'
"	<i>i gāari</i>	'they came to him'
"	<i>i gāajà</i>	'they came to us (excl.)'
"	<i>i gāakcl</i>	'they came to them'

<sup>60</sup>R. Lukas (1968:111) gives '*āmāa-nē* 'my mother' [sic: my wife] as an "exception" to her rules governing associative pronouns. She did not realize that there is a class of inalienable nouns separate from regular feminine nouns.

<sup>61</sup>The words for 'in-law' show unique behavior very similar to that in GB. Thus, only singular associative pronouns use the constructions in (75c). If the pronoun is plural, the constructions of (75a or b) are used: *sūwārāanjà* 'our father-in-law', not \**sūwārāajà*. Also as in GB, the constructions of (75a and b) are acceptable alternatives to those of (75c). Thus, *sūwārāai* 'your in-law (m. or f.)' could alternatively be expressed as *sūwārāanjāi* 'your father-in-law' or *sūwārāatkli* 'your mother-in-law'. See also fn. 65.

IN use the construction of (75c) only in the singular. In the plural they behave like MN, e.g. *āmātānjā* 'our wives', *āmātākcl* 'their wives' (*āmātān*); *ṛgūgwāanjā* 'our households' (*ṛgūgūn*).

As in GB (cf. pp. 42-43) the verb suffix (or suffixes) *-dū* requires that pronominal, but not nominal, complements be in associative construction with it.

(78) a.  $A_1 = -dū$  the transitizer

- āugzāgdī* 'put it back!' (m.sg. imperative) (cf. *āugzī* 'go back!')
- āugzādāanē* 'take me back!'
- āugzādāarī* 'take him back!'
- āugzāgdī dāmāaw* 'take back the wood!'

b.  $A_1 = -dū$  the totality extension

- ācī dāagādū* 'he prevented' (< \**dāagū* + *dū*)
- ācī dāagādāanē* 'he prevented me'
- ācī dāagādāarī* 'he prevented him'
- ācī dāagādē māanyāmūw* 'he prevented the boy'

3.2.2.  $A_2 =$  Common Noun (CN)

When  $A_2$  is a CN, the basic associative construction type is the same as for GB, viz.  $A_1$ -/k/  $A_2$ . The allomorphs of /k/ itself are quite similar to those in GB (cf. (69b)):

(79) WB /k/ REALIZATION

$$/k/ \rightarrow \begin{cases} \text{(i)} & \emptyset / \text{---} [+velar] \text{ (including } w, h < *x, gh [\hat{h}] < *\gamma) \\ \text{(ii)} & g / \text{---} \begin{bmatrix} C \\ +voice \\ -nasal \end{bmatrix} \\ \text{(iii)} & k / \text{---} \begin{bmatrix} C \\ \{-voice\} \\ +glottal \end{bmatrix} \\ \text{(iv)} & \eta \text{ elsewhere, i.e. before nasals and vowels} \end{cases}$$

The allomorph  $\eta$  is also used as a hesitation allomorph in any environment. See (82) for examples of allomorphs of /k/.

Nunation is always deleted from  $A_1$  in associative constructions. However, an associative construction with CN as  $A_2$  cannot be formed simply by replacing nunation with /k/. This fact shows up most strikingly where  $A_1$  is a masculine noun ending in *-āan* in its citation form. Such nouns never retain the long *-aa-* when used as  $A_1$ ,<sup>62</sup> e.g. *kūnāan* 'belly', but

<sup>62</sup>Long *-aa-* does show up in many compounds which otherwise might look like associative constructions, e.g. *īi mny-aa-zga* 'to the opposite bank' (lit: to mouth-*aa*-bank), *mny-āa-skūn* 'upper lip' (lit: mouth-*aa*-above). Long *-aa-* is found in this type of compound even if the first element is a feminine noun, e.g. *ād-āa-bzākēn* 'rubbish heap' (lit: head-*aa*-rubbish heap) < *ādān* 'head' (f.), *gūdkw-āa-dān* 'eye socket' (lit: pot-*aa*-eye) < *gūdkwān* 'pot' (f.), *d-āa-zgārēn* 'ankle' (lit: eye-*aa*-foot) < *dān* 'eye' (f.). See section 4.2.2 for discussion of the function of this *-aa-*.

*kúnɔg dūwūn* 'belly of a horse', *ṁnyāan* 'mouth', but *ṁnyək dūwūn* 'mouth of a horse'.<sup>63</sup>

The replacement of *-aa-* by *-ə-* (and also the replacement of high tone by low) is reminiscent of the fact, cited in section 1.3, that nouns in the definite form tend to take final *-ɛ̃* rather than citation or etymological vowel and tone (cf. (25) and (26)). With this observation in mind, I elicited constructions with the nouns in (25) as *A<sub>1</sub>* in associative constructions for the same group of speakers. The result was that for every noun having long *-āa-* in the citation form, every speaker replaced *-āa-* by *-ə-* in associative constructions. The vowel *-ə-* was even used by those speakers who sometimes used *-a* on the definite form of nouns, e.g. all speakers gave *vərdəŋ dāwūn* 'newly ripe head of millet' (*vərdāan*) even though some gave *vərdā* as the definite form; all speakers gave *vāyɛ ngwāajā* 'the outside of our compound' (*vāyāan*) even though all gave *vāyā* as the definite form. There must therefore be a different rule for forming the definite forms of nouns than for forming the stems of nouns used as *A<sub>1</sub>* in associative constructions. The former is the multipart rule (26). The latter is the very general rule (80):

(80) WB ASSOCIATIVE STEM FORMATION

*aa* → *ə* / ...\_\_# /k/ CN

That is, the long *aa* in the citation form of nouns is replaced by *ə* when the noun appears as *A<sub>1</sub>* of an associative construction where *A<sub>2</sub>* is a CN.

Another rule is needed to supply tones to the final vowel of *A<sub>1</sub>* before CN. This rule applies to all nouns, regardless of the gender of the noun or the vowel quality:

(81) WB ASSOCIATIVE TONE

Tone → Lo / ...\_\_# /k/ CN

That is, the final syllable of *A<sub>1</sub>* is low before CN as *A<sub>2</sub>*. In some of the following examples, the effects of this rule are wiped out by the phonetic rule of TONE RAISING (2), e.g. all the examples where *A<sub>1</sub>* is *sɛilāan* 'bone'.

(82) a. *A<sub>1</sub>* = MN, *A<sub>2</sub>* = CN

<i>əzgərən</i>		'foot'
<i>əzgərɛ hūrgūmən</i>	( <i>hūrgūmən</i> )	'foot of an aardvark'
<i>əzgərɛg zilyāmən</i>	( <i>zilyāmən</i> )	'foot of an ostrich'
<i>əzgərɛg rākén</i>	( <i>rākén</i> )	'foot of a bed'
<i>əzgərɛk sāngūrāarīin</i>	( <i>sāngūrāarīin</i> )	'foot of an Abdim's stork'
<i>əzgərɛŋɛ nsāan</i>	( <i>nsāan</i> )	'foot of a hippopotamus'
<i>dācən</i>		'hair; feathers'
<i>dācɛ kwāmən</i>	( <i>kwāmən</i> )	'hair of a bull'
<i>dācɛg vɛivɛidgwārən</i>	( <i>vɛivɛidgwārən</i> )	'hair of a giant rat'
<i>dācɛk cīyāakāan</i>	( <i>cīyāakāan</i> )	'feathers of a hornbill'
<i>dācɛŋ āmātən</i>	( <i>āmātən</i> )	'hair of women'

<sup>63</sup>When constructions with *ṁnyāan* 'mouth' as *A<sub>1</sub>* before CN were directly elicited, speakers always gave *ṁnyə-*. In texts, this noun, but no others to my knowledge, appears as *ṁnyā-* with final *-a-* rather than *-ə-*, e.g. *ṁnyā kārāgdan* 'the edge (mouth) of the bush'. Note that the *a* is short and has low tone.

## (82) a. (cont.)

<i>sīlāan</i>		'bone'
<i>sīlō wūnāajāan</i>	( <i>wūnāajāan</i> )	'bone of a dog'
<i>sīlōg dūwūn</i>	( <i>dūwūn</i> )	'bone of a horse'
<i>sīlōk dīitōn</i>	( <i>dīitōn</i> )	'bone of a bird'
<i>sīlōg ākōn</i>	( <i>ākōn</i> )	'spine' (bone of back)
<i>āarō kāzāmōn</i>	( <i>āardān, kāzāmōn</i> )	'side of a young woman'
<i>zāyīg yāagān</i>	( <i>zāyāan, yāagān</i> )	'rope for a boundary'
<i>ūurōk tēmākūn</i>	( <i>ūurāan, tēmākūn</i> )	'neck of a sheep'
<i>gwāmōg māayāan</i>	( <i>gwāmāan, māayāan</i> )	'ram of an emir'
<i>ākōn</i>		'back'
<i>ākō hūrgūmōn</i>		'back of an aardvark'
<i>ākōg zīyāmōn</i>		'back of an ostrich'
<i>ākōg dūwūn</i>		'back of a horse'
<i>ākōk tēmākūn</i>		'back of a sheep'
<i>rēe gwāyāan</i>	( <i>rēn, gwāyāan</i> )	'place of an <i>Acacia albida</i> '
<i>rēg āmātōn</i>		'place of women'

b.  $A_1 = \text{FN}$ ,  $A_2 = \text{CN}$ 

<i>ādān</i>		'head'
<i>ādā gājākāan</i>	( <i>gājākāan</i> )	'head of a catfish'
<i>ādāg jīlāagjīlōgāan</i>	( <i>jīlāagjīlōgāan</i> )	'head of a dung beetle'
<i>ādāk bīidōn</i>	( <i>bīidōn</i> )	'head of a leech'
<i>ādāg nyāmnyāmōn</i>	( <i>nyāmnyāmōn</i> )	'head of a flea'
<i>gūmcōn</i>		'chin'
<i>gūmcōg ēgārōn</i>	( <i>ēgārōn</i> )	'chin of an old man'
<i>gūmcōg būuzōrāan</i>	( <i>būuzōrāan</i> )	'chin of a billygoat'
<i>gūmcōk sūwārāan</i>	( <i>sūwārāan</i> )	'chin of an in-law'
<i>gūmcōg ēgdēmōn</i>	( <i>ēgdēmōn</i> )	'chin of a crocodile'
<i>gūnēn</i>		'hip joint'
<i>gūnēe hūrgūmōn</i>		'hip joint of an aardvark'
<i>gūnēg dūwūn</i>		'hip joint of a horse'
<i>gūnēk tēmākūn</i>		'hip joint of a sheep'
<i>sōg dēmāan</i>	( <i>sōn, dēmāan</i> )	'base of a tree'
<i>sō gwāyāan</i>		'base of an <i>Acacia albida</i> '

c.  $A_1 = \text{IN}$ ,  $A_2 = \text{CN}$ 

<i>āmāk cəbənān</i>	( <i>cəbənān</i> )	'wife of a namesake'
<i>āmāg bəlāamān</i>		'wife of a village head'
<i>ṅgwāṅ māayāan</i>		'household of a chief'
<i>sūwārə kəzāmən</i>		'in-law of a young woman'

d.  $A_1 = \text{VN}$ ,  $A_2 = \text{CN}$ 

<i>əbdān</i>	'asking'
<i>nāabdā kəzāmən</i>	'I will ask a young woman'
<i>nāabdāg bəlāamā</i>	'I will ask a village head'
<i>nāabdāk cəbənān</i>	'I will ask a namesake'
<i>nāabdāṅ āmātən</i>	'I will ask some women'
<i>gəfən</i> <sup>64</sup>	'catching'
<i>nā gəfən kwāmən</i>	'I will catch a bull'
<i>nā gəfəg būuzəṛāan</i>	'I will catch a billygoat'
<i>nā gəfək təmākūn</i>	'I will catch a sheep'
<i>nā gəfəṅ məsān</i>	'I will catch a catfish'

e.  $A_1 = \text{Prep}$ ,  $A_2 = \text{CN}$ 

<i>nə jīi gə kəzāmən</i>	'I went to a young woman'
<i>nə kārūm āawūn dēg dābīin</i>	'I reaped corn with a hoe'
<i>āci jū gōg dābīin</i>	'he went without a hoe'
<i>nəzgəm dēk sūgūmən</i>	'I planted with a planting hoe'
<i>āci jīi gəṅ māaydaw</i>	'he went to the emir'
<i>āci əlmə kəasōn dēṅ māgvāan</i>	'he built a hut with a door'
<i>āci əlmə kəasōn gōṅ māgvāan</i>	'he built a hut without a door'

If  $A_1$  is not overtly expressed or is separated from  $A_2$  by some intervening material,  $A_2$  is preceded by (ṅ)kā/k/ 'that of' (the nasal prefix is characteristic of the more westerly WB speaking villages—cf. (75d)):

(85)	<i>kāk sāavānyən</i>	'that of a guinea fowl'
	<i>kāṅ əktlən</i>	'that of a cow'
	<i>kāṅ Mūuzə</i>	'that of Muza, Muza's'
	<i>kā kwāmən</i>	'that of a bull'
	<i>āisāa mdo kāk əlmən</i>	'this earth for masonry'
	earth this that-of building	

<sup>64</sup>For some reason, this verbal noun does not follow the tonal rule (81). I doubt that this is a transcription error, so (81) may have to be modified in some details. Note that 'without' in (82e) also does not have low tone in one instance.



(83) (cont.)

<i>d̄m̄āa mdō k̄āŋ āk̄ān</i>	'this wood for a fire'
wood this that-of fire	
<i>k̄āas̄ōor̄i k̄āŋ māḡār̄ār̄v̄n̄ōn</i>	'his room for guests'
room-his that-of guests	

3.2.3. A<sub>2</sub> = Specific Noun (SN) or 'who?'

When A<sub>2</sub> is SN or 'who?' and A<sub>1</sub> is MN or FN, WB does not use noun stems formed by rules (80) and (81). Rather, it uses the citation stem (minus nunation) plus gender sensitive linkers. If A<sub>1</sub> is FN, the linker is *tk̄ō-/k/*, e.g. *ākū-tk̄ō-ŋ Mūw̄r̄im̄ā* 'Murima's goat' (*ākūn*) (cf. *ākū-ŋ māz̄m̄āan* 'a blacksmith's goat'). Such constructions will be recognized as being virtually identical to the corresponding constructions of GB (cf. section 3.1.3).

Masculine constructions in WB differ slightly from the corresponding constructions of GB. Instead of the masculine linker *-n* seen in GB, WB has a linker which I will label */k/\**. */k/\** has the same allomorphs as */k/* (see (79)) except before velars. Whereas */k/* has the allomorph *ø* before velars, */k/\** has the allomorph *ŋ*. Thus, there is a contrast between *p̄r̄ām̄ō k̄āz̄m̄ān* 'shin of a young woman' (*p̄r̄ām̄ān* 'shin'), where A<sub>2</sub> is a CN, and *p̄r̄ām̄ōŋ K̄ābō* 'Kabo's shin', where A<sub>2</sub> is a SN.

In addition to the differences in linkers used in WB before CN and before SN, there is a tonal difference. When A<sub>2</sub> is a CN, A<sub>1</sub> always has final low tone (see rule (81)). However, if A<sub>2</sub> is an SN, A<sub>1</sub> has a final high tone as it would in its citation form. Compare the tones in the following constructions from the citation form *d̄āc̄ōn* 'hair':

A <sub>2</sub> = CN	A <sub>2</sub> = SN
<i>d̄āc̄ōŋ māz̄m̄āan</i> 'hair of a blacksmith'	<i>d̄āc̄ōŋ Mūuz̄ā</i> 'Muza's hair'
<i>d̄āc̄ō k̄āz̄m̄ān</i> 'hair of a virgin'	<i>d̄āc̄ōŋ K̄ābō</i> 'Kabo's hair'
<i>d̄āc̄ōk̄ t̄m̄ākūn</i> 'hair of a sheep'	<i>d̄āc̄ōk̄ C̄āakw̄ā</i> 'Cakwa's hair'
<i>d̄āc̄ō k̄ēm?</i> 'hair of what?' (= 'what kind of hair?')	<i>d̄āc̄ōŋ k̄ē?</i> 'whose hair?'

In some of the examples that follow, the final syllable of A<sub>1</sub> is low because of the phonetic rule of TONE LOWERING (3):

(85) a. A<sub>1</sub> = MN, A<sub>2</sub> = SN

<i>kūn̄āan</i> 'belly'	<i>k̄ājlūw̄āan</i> 'mush'	<i>ōzḡār̄ōn</i> 'foot'
<i>kūn̄āŋ Ḡāak̄iȳō</i>	<i>k̄ājlūw̄āŋ Ḡāaj̄l̄</i>	<i>ōzḡār̄ōŋ K̄ābō</i>
<i>kūn̄āaḡ J̄l̄āaw̄i</i>	<i>k̄ājlūw̄āak̄ T̄āav̄l̄</i>	<i>ōzḡār̄ōḡ B̄ād̄ēem̄ā</i>
<i>kūn̄āak̄ T̄āav̄l̄</i>	<i>k̄ājlūw̄āŋ k̄ē?</i>	<i>ōzḡār̄ōk̄ C̄āakw̄ā</i>
<i>kūn̄āŋ Ābdū</i>		<i>ōzḡār̄ōŋ Mūuz̄ā</i>
<i>kūn̄āŋ k̄ē?</i>		<i>ōzḡār̄ōŋ k̄ē?</i>

b. A<sub>1</sub> = FN, A<sub>2</sub> = SN

<i>d̄ān</i> 'eye'	<i>ākūn</i> 'goat'
<i>d̄ātk̄ō K̄āv̄ȳō</i>	<i>ākūtk̄ō Ḡāaj̄l̄</i>
<i>d̄ātk̄ōḡ Z̄āb̄ā</i>	<i>ākūtk̄ōḡ J̄āaj̄l̄</i>

(85) b. (cont.)

<i>dātkāk Sāakū</i>	<i>ākūtkāk Tālāmā</i>
<i>dātkāṅ Āagūnzām</i>	<i>ākūtkāṅ Mūurīimā</i>
<i>dātkā kē?</i>	<i>ākūtkā kē?</i>

For IN, VN, and Prep, i.e. those categories where gender is irrelevant for associative constructions, the general linker /k/ is used before SN just as before CN.

(86) a.  $A_1 = \text{IN}, A_2 = \text{SN}$ <sup>65</sup>

<i>ṅgwāg Jāajī</i>	'Jaji's household'
<i>ṅgwā Kābō</i>	'Kabo's household'
<i>ṅgwā kē?</i>	'whose household?'
<i>āmā Kābō</i>	'Kabo's wife'
<i>āmā kē?</i>	'whose wife?'

b.  $A_1 = \text{VN}, A_2 = \text{SN}$ 

<i>nā māakāg Jāajī</i>	'I'm looking for Jaji'
<i>nā māakā Kābō</i>	'I'm looking for Kabo'
<i>yā māakā kē?</i>	'who are you looking for?'

c.  $A_1 = \text{Prep}, A_2 = \text{SN}$ 

<i>ākcī rūuyū dēg Jāajī</i>	'they farmed with Jaji'
<i>ākcī rūuyū dēe Kābō</i>	'they farmed with Kabo'
<i>ākcī rūuyū dēe kē?</i>	'who did they farm with?'

### 3.3. Southern Bade

#### 3.3.1. $A_2 = \text{Associative Pronoun}$

All the same differentiations in associative constructions are found in SB as in GB and WB, though the combination of morphemes is slightly different from either of the other dialects. The associative pronoun constructions of SB are as follows:

(87) a. $A_1$ is MN	b. $A_1$ is FN	c. $A_1$ is IN, VN, Prep	d. Independent
1sg. <i>-(aa)ṣ-n-āa(nāi)</i>	<i>-tk-āa(nāi)</i>	<i>-āandi</i>	<i>kāandi</i>
2m.sg. <i>-(aa)ṣ-n-āi</i>	<i>-tk-āi</i>	<i>-āa-gāi</i>	<i>kāagāi</i>
2f.sg. <i>-(aa)ṣ-n-ām</i>	<i>-tk-ām</i>	<i>-āa-gām</i>	<i>kāagām</i>
3m.sg. <i>-(aa)ṣ-ni</i>	<i>-tk-ā-ni</i>	<i>-āa-ni</i>	<i>kāari</i>
3f.sg. <i>-(aa)ṣ-nā</i>	<i>-tk-ā-nā</i>	<i>-āa-nā</i>	<i>kāarā</i>

<sup>65</sup>The word for 'in-law' before SN can be used only as FN or MN. Thus, *sūwārāak Cāakwā* 'Cakwa's father-in-law', *sūwārāṅ kē?* 'whose father-in-law?' where  $A_1$  is treated as MN were the only acceptable forms. The expected forms with  $A_1$  treated as IN, viz. *\*sūwārā Cāakwā* and *\*sūwārā kē?*, were rejected.

(87) (cont.)

1pl.ex.	-(aa)-n-jā	-tkō-jā	-āa-jā	kāajā
1pl.in.	-(aa)-n-gwā	-tkū-wā	-āa-wā	kāawā
2pl.	-(aa)-wūn	-tkū-wūn	-āa-wūn	kāawūn
3pl.	-(aa)-ksī	-tkō-ksī	-āa-ksī	kāaksī

These paradigms are almost identical to those for GB (see (65)). As for GB, the parenthesized -aa- in the A<sub>1</sub> = MN paradigm replaces the final vowel of masculine nouns, with one exception. Nouns in SB cannot end in an obstruent. Words which end in an obstruent in other dialects have a postthetic -i in SB, e.g. pōbātī 'ashes' (GB pōbāt), vādī 'five' (GB vād), mōkī 'husband' (GB mōk). For such nouns, the final -i does not function as a stem vowel for purposes of replacement by -aa-. Thus, gōomākī 'ram', gōomākīnāa 'my ram' (cf. GB gwāmāk).

(88) a. A<sub>1</sub> = MN

cānī 'place'	mōkī 'name' (postthetic -i)
cānāandā	mōkīnāi
cānāarī	mōkīksī
cānāangwā	

b. A<sub>1</sub> = FN

ōktlā 'cow'
ōktlātākāandi
ōktlātākīi
ōktlātākōrī
ōktlātākūwā

c. A<sub>1</sub> = IN

īgāwā- 'household'
īgāwāandi
īgāwāagīi
īgāwāarī
īgāwājā

d. A<sub>1</sub> = VN

ōbdā 'asking'	ācī āabdāagīi 'he will ask you'
gōfī 'catching'	nāgōfāarī 'I will catch him'

e. A<sub>1</sub> = Prep

ā gāagīi	'in your presence'
jā wānō dāarī	'we worked with him'

3.3.2.  $A_2$  = Common Noun (CN)

Associative constructions with  $A_1$  of any category and  $A_2$  a CN always have the form  $A_1$  -/k/  $A_2$ . /k/ has the same segmental allomorphs as in WB (see (79)). While I was not able to investigate tones in SB in the same detail as for the other dialects, it appears that the tones of SB associative constructions are the same as for WB, i.e. the final syllable of  $A_1$  is always low (cf. rule (81)) and the tones of  $A_2$  are unaffected.

(88) a.  $A_1$  = MN,  $A_2$  = CN

<i>dācì</i>	'hair'
<i>dācə kwām</i>	'hair of a bull'
<i>dācəg dīkwā</i>	'hair of a horse'
<i>dācək tēmākū</i>	'hair of a sheep'
<i>dācəŋ āmātī</i>	'hair of women'

b.  $A_1$  = FN,  $A_2$  = CN

<i>dā</i>	'eye'
<i>dā kwām</i>	'eye of a bull'
<i>dāg zēmānyī</i>	'eye of an ostrich'
<i>dāk dīitā</i>	'eye of a bird'
<i>dāŋ əktlā</i>	'eye of a cow'

c.  $A_1$  = IN,  $A_2$  = CN

<i>ŋgwāŋ mǎi</i>	'household of an emir'
------------------	------------------------

d.  $A_1$  = VN,  $A_2$  = CN

<i>nāabdā gāmā</i>	'I will ask a woman'
<i>nāabdāŋə mǎi</i>	'I will ask a person'

e.  $A_1$  = Prep,  $A_2$  = CN

<i>dəg dābī</i>	'with a hoe'
-----------------	--------------

If  $A_1$  is not overtly expressed or is separated from  $A_2$  by some intervening material,  $A_2$  is preceded by *kā*/k/ 'that of'

(89) <i>kā kwām</i>	'that of a bull'
<i>kāk sāvānyī</i>	'that of a guinea fowl'
<i>kāŋ ākū</i>	'that of a goat'
<i>kāŋ Mūsā</i>	'Musa's, that of Musa'
<i>dēmə msāu kāŋ ākū</i>	'this wood for a fire'
<i>kāsōorī kāŋ māgərdərvōn</i>	'his room for guests'

3.3.3.  $A_2$  = Specific Noun (SN) or 'who?'

When  $A_2$  is SN or 'who?' and  $A_1$  is MN or FN, the following linking constructions are required:

(90)  $A_1 = \text{MN}, A_2 = \text{SN or 'who?'}$  $A_1 = \text{FN}, A_2 = \text{SN or 'who?'}$  $A_1 - \{aa\} - /k/* A_2$  $A_1 - tk\tilde{o} - /k/ A_2$ 

The resultant form of these constructions will be recognized as being identical to those of WB. The description of their formation is slightly different, however, in that the parenthesized *-āa-* replaces the final vowel of masculine nouns (except for the postthetic *-i* mentioned in section 3.3.1). In WB, the vowel preceding */k/\** is already part of the noun stem of  $A_1$ .

(91) a.  $A_1 = \text{MN}, A_2 = \text{SN}$ *kūnū* 'belly'*dācī* 'hair'*kūnāak Cāakwā*:*dācīk Cāakwā**kūnāarj Kābō**dācīrj Kābō*b.  $A_1 = \text{FN}, A_2 = \text{SN}$ *dā* 'eye'*dātkīk Cāakwā**dātkī Kābō*

When  $A_1$  is IN, VN, or Prep, the associative construction is formed as for CN as  $A_2$  (see 3.3.2).

(92)  $A_1 = \text{IN}, A_2 = \text{SN}$ *ḡgwā Gārbā*

'Garba's household'

*ḡgwāg Dāudā*

'Dauda's household'

*ḡgwāk Fāatāmā*

'Fatima's household'

*ḡgwārj Āadāmū*

'Adamu's household'

### 3.4. Ngizim

Ngizim no longer has a grammatical gender distinction nor does it recognize the grammatical categories IN or SN. Moreover, prepositions do not take associative complements. Thus, there is only a single type of Noun + Noun associative construction (including those where  $A_1$  is a Verbal Noun) and a single construction type where  $A_2$  is a pronoun.

The associative pronouns of Ngizim are as follows:

(93)	Bound	Independent
1sg.	<i>-gāa(nāi)</i>	<i>kāa(nāi)</i>
2m.sg.	<i>-(aa)-cī</i>	<i>kīcī</i>
2f.sg.	<i>-(aa)-kām</i>	<i>kīkām</i>
3m.sg.	<i>-gārī</i>	<i>kārī</i>
3f.sg.	<i>-gārā</i>	<i>kārā</i>

## (93) (cont.)

1pl.ex.	-(aa)-jā	kājā
1pl.in.	-(aa)-wā	kūwā
2pl.	-(aa)-kūn	kūkūn
3pl.	-(aa)-kshî	kākshî

The parenthesized -aa- of the bound pronouns replaces the final vowel of nouns ending in -a, -i, or -u. If the noun ends in a mid-vowel, a diphthong, or a consonant other than -k, -aa- is not present. For nouns ending in -k, two patterns are found: the prevalent pattern is to treat final -k as any other consonant, i.e. it is retained and the pronouns without -aa- are suffixed. A second pattern is to delete the -k and replace the vowel preceding it by -aa-. The latter pattern is applied consistently to the word māsək 'husband', but much less so with other nouns.<sup>66</sup> Tone preceding pronouns other than first and third person singular (i.e. all low tone pronouns) is high.

(94) wūnyā 'daughter'	āakū 'goat'	māayīm 'boy'	sōonō 'shoe'
wūnyāgāa	āakwāakəm	māayīmcī	sōonōogāa
wūnyāacī	āakūgārī	māyīngārā	sōonōocī
wūnyāajā	āakwāakūn	māayīmkshî	
rākāi 'bed'	gōomāk 'ram'	māsək 'husband'	
rākīigāa	gōomāggārī	māsəgāa	
rākīicī	gōomāguā	māsāakəm	
rākīigārī	gōomāgjā	māsəgārā	
rākīiwā	gōomākkūn	māsāakshî	
	gōomākshî		

The linker /k/ used between two nouns has the following allomorphs (rules ordered from top to bottom):

## (95) NGIZIM LINKER REALIZATION

/k/ →	(i)	(opt)	∅
	(ii)	gā	/ { C C (opt) — [ C +son ] }
	(iii)	g	/ — [+voice] (consonant or vowel)
	(iv)	k	/ — [-voice] (includes glottalized C)

In addition to these, there is a hesitation allomorph gāj (cf. the WB hesitation allomorph -ŋ mentioned following (79)).

<sup>66</sup>This is another example of the process of KAFATION (see 2.3 and fn. 33). Deletion of -k is more frequently applied for the Previous Reference Marker (see 2.3) than for pronouns. Thus, in one text where the word rāvək 'skin, hide' appears frequently, both rāvək-gū and rāvū-w 'the hide' are found but with associative pronouns, only forms with final -k intact, e.g. rāvək-gārā 'her hide', are found.

The  $\phi$  realization of the linking morpheme is possible in any Noun + Noun associative construction (cf. Bade where  $\phi$  is an allomorph of /k/ only before velars). The  $\phi$  allomorph may be obligatory if  $A_1$  ends in a -k. I have no examples of any of the other allomorphs in this environment, though I never specifically checked for it. If  $\phi$  is not chosen, g $\phi$  is obligatory when  $A_1$  ends in a consonant and  $A_2$  begins in one. This allomorph is also an optional possibility when  $A_2$  begins in a sonorant consonant since the sequence obstruent + sonorant is not normally permissible. It is allowed across word boundaries, however, so the g allomorph is also possible before sonorants.

The following tone rule also operates in associative constructions:

(96) NGIZIM ASSOCIATIVE TONE DISSIMILATION

Lo  $\rightarrow$  Hi / \_\_\_\_ /k/ Lo

That is, if  $A_1$  ends in a low tone and  $A_2$  begins in a low tone, the final syllable of  $A_1$  is raised to high.<sup>67</sup> The rule that the syllable before low tone pronouns be high (see above) may be part of the same process.

With the exception of the first example in (97), where  $A_1$  ends in -k, all the examples are given with one of the overt allomorphs of /k/ from (95 ii-iv). All these examples could equally well be realized with no overt linking morpheme. Rule (96), TONE DISSIMILATION, would still apply, however.

- |  |                           |                             |
|--|---------------------------|-----------------------------|
| (97) <i>āikwāk māayīm</i>                      | ( <i>āikwāk, māayīm</i> ) | 'hand of a boy'             |
| <i>tōn-gō bōjlāmū</i>                          | ( <i>tōn, bōjlāmū</i> )   | 'nose of a hyena'           |
| <i>gūzōb-gō dōgēm</i>                          | ( <i>gūzōb, dōgēm</i> )   | 'slave of a chief'          |
| <i>tōsūwā gō mārdu</i> = <i>tōsūwā-g mārdu</i> | ( <i>tōsūwā, mārdu</i> )  | 'stalk of millet'           |
| <i>āwāi-g rīdūwā</i>                           | ( <i>āwāi, rīdūwā</i> )   | 'leaves of beans'           |
| <i>tōkā-g dūukā</i>                            | ( <i>tōkā, dūukā</i> )    | 'body of a horse'           |
| <i>ām-g ākā</i>                                | ( <i>ām, ākā</i> )        | 'hot water' (water of fire) |
| <i>kārgūn-g ākōrāk</i>                         | ( <i>kārgūn, ākōrāk</i> ) | 'remedy against thieves'    |
| <i>dūukā-k dūuyāk</i>                          | ( <i>dūukā, dūuyāk</i> )  | 'bicycle' (horse of iron)   |
| <i>vūyā-k tōkā</i>                             | ( <i>vūyā, tōkā</i> )     | 'bathing' (washing of body) |

If  $A_1$  is not expressed or is separated from  $A_2$  by intervening material,  $A_2$  is preceded by *kō* 'that of'.

- |                     |                  |
|---------------------|------------------|
| (98) <i>kō āakū</i> | 'that of a goat' |
| <i>kō tlā</i>       | 'that of a cow'  |
| <i>kō dūutā</i>     | 'that of a bird' |

<sup>67</sup>Rule (96) operates on underlying tones. If the initial syllable is subject to rule (2), TONE RAISING, the two underlying low tones will both be phonetically high. For example in the phrase /*kīdā-k tlūwāi*/ 'eating of meat', rule (96) first applies to raise the last syllable of *kīdā*, then TONE RAISING applies to raise the initial syllable of *tlūwāi*, giving the phonetic result [*kīdāk tlūwāi*].

(98) (cont.)

<i>kə ɒəmzà</i>	'Dəmza's, that of Dəmza'
<i>gǎgǎi-tkú kə ləmà</i>	'this earth for masonry'
<i>dəm-tkú kə ákà</i>	'this wood for a fire'
<i>səsúu-gərí kə mǎgərǎfɛín</i>	'his room for guests'

## 3.5. Duwai

Like Ngizim, Duwai does not have a grammatical gender distinction nor does it recognize the grammatical categories IN or SN. While Duwai has only a single way to form Noun + Noun associative phrases and a single set of associative pronoun constructions, the rules for surface realization of these constructions are a bit more complicated than they are for Ngizim.

The associative pronouns of Duwai are as follows:

(99)	Bound	Independent
1sg.	-VV-tì	<i>kətì</i> <i>ŋgǎatì</i>
2m.sg.	-VV-ɲɔk	<i>kərɔk</i> <i>ŋgǎarɔk</i>
2f.sg.	-VV-ɲəm	<i>kərəm</i> <i>ŋgǎarəm</i>
3m.sg.	-VV-ɲí	<i>kərí</i> <i>ŋgǎarí</i>
3f.sg.	-VV-ɲá	<i>kərá</i> <i>ŋgǎará</i>
1pl.ex.	-áa-gè	<i>kǎagè</i> <i>ŋgdagè</i>
1pl.in.	-áa-gò	<i>kǎagò</i> <i>ŋgdagò</i>
2pl.	-áa-kù	<i>kǎakù</i> <i>ŋgdakù</i>
3pl.	-áa-kshì	<i>kǎakshì</i> <i>ŋgdakshì</i>

If the pronoun is plural, it is always preceded by -áa-. If A<sub>1</sub> ends in a short vowel, -áa- replaces it, but if A<sub>1</sub> ends in a long mid vowel (long high and low vowels are not found word final) or a diphthong, the vowel or diphthong remains and the appropriate epenthetic semi-vowel is inserted (see the right-hand column in (100) for examples). The vowel -VV- before singular bound pronouns is determined by the conditions in (100):

(100) If A<sub>1</sub> ends in long -ee or -oo, -VV- is long -ee- or long -oo- respectively:<sup>68</sup>

<i>kārēe</i>	'load'	<i>kārēetì</i>	<i>kārēyāagò</i>
		<i>kārēeri</i>	
<i>dūundo</i>	'strength'	<i>dūundoɔtì</i>	<i>dūundoŋagò</i>
		<i>dūundoorɔk</i>	

<sup>68</sup>Only a small number of words ending in mid vowels have long final vowels. They may all be borrowed words (the two examples here are from Kanuri). One word, *mě* 'mouth', behaves as if it ended in -ai, i.e. the forms with associative pronouns are *mīitì*, *mīirɔk*, etc. Note also that the tone on *ii* in *mīirɔk* 'your mouth' is high whereas according to (99) it should be low. The statement in (99) should be amended to note that -VV- is always high if A<sub>1</sub> has the form CV(V).



(100) (cont.)

If A<sub>1</sub> ends in *-ai* or *-au*, *-VV-* is *-ii-* or *-uu-* respectively (cf. rule (6), MONOPH-  
THONGIZATION):

<i>ũufâi</i>	'thing'	<i>ũufiitî</i>	<i>ũufiĩyãagò</i>
		<i>ũufiĩrɔ̃k</i>	
<i>nâyâu</i>	'tooth'	<i>nâyũutî</i>	<i>nâyũwãagò</i>
		<i>nâyũurɔ̃k</i>	

For some nouns ending in *-a*, *-VV-* is *-aa-*:<sup>69</sup>

<i>tlā</i>	'cow'	<i>tlāatî</i>	<i>tlāagè</i>
		<i>tlāarɔ̃k</i>	
<i>ɔ̃tkā</i>	'body'	<i>ɔ̃tkāatî</i>	<i>ɔ̃tkāagò</i>
		<i>ɔ̃tkāarî</i>	

For other nouns ending in *-a*<sup>69</sup> or any other short vowel, *-VV-* is *-ɔ̃ɔ̃-*:

<i>mā</i>	'wife'	<i>māɔ̃tî</i>	<i>māagò</i>
		<i>māarɔ̃k</i>	
<i>wāandā</i>	'work'	<i>wāanɔ̃tî</i>	<i>wāanāagò</i>
		<i>wāanarî</i>	
<i>tlũwĩ</i>	'meat'	<i>tlũwɔ̃tî</i>	<i>tlũwãagè</i>
		<i>tlũwɔ̃arɔ̃k</i>	
<i>ɔ̃skĩ</i>	'hut'	<i>ɔ̃skyɔ̃tî</i>	<i>ɔ̃skyãagò</i>
		<i>ɔ̃skyɔ̃arî</i>	
<i>kũnũ</i>	'belly'	<i>kũnɔ̃tî</i>	<i>kũnāakũ</i>
		<i>kũnɔ̃arî</i>	
<i>āmē</i>	'arm'	<i>āmɔ̃tî</i>	<i>āmāagò</i>
		<i>āmɔ̃arî</i>	
<i>ũurē</i>	'neck'	<i>ũurɔ̃tî</i>	<i>ũurāagò</i>
		<i>ũurɔ̃arî</i>	
<i>mũutō</i>	'death'	<i>mũutɔ̃tî</i>	<i>mũutāagò</i>
		<i>mũutɔ̃arî</i>	

If A<sub>1</sub> ends in a consonant other than a nasal, *-VV-* is *-ɔ̃ɔ̃-*:

<i>ɔ̃zgɔ̃r</i>	'foot'	<i>ɔ̃zgɔ̃rɔ̃tî</i>	<i>ɔ̃zgɔ̃rāagò</i>
		<i>ɔ̃zgɔ̃rɔ̃arî</i>	
<i>wũd'</i>	'name'	<i>wũdɔ̃tî</i>	<i>wũdāagè</i>
		<i>wũdɔ̃arɔ̃k</i>	

<sup>69</sup>The apparently unpredictable distinction between nouns ending in *-a* which is always phonetically [a] and nouns ending in *-a* which alternates with [ə] was mentioned earlier in fn. 28.



## (103) TONE SHIFT

Floating high tone (ˈ) is transferred to the first vowel to the right except in the environment / \_\_\_\_ [+voice] V ˈ (? or / \_\_\_\_ Cə only), in which case it is shifted to the left. [ +obst ]

(This rule is interpreted and illustrated below.)

Some qualifications will be necessary, but these rules cover most cases. Examples describable in terms of (101)-(103) are given in (104). A number of these examples also incorporate (2), TONE RAISING, and (3), TONE LOWERING.

(104)	ətkā	+	tlā	→	ətkāk tlā	'body of a cow'
	ətkā	+	jləgmō	→	ətkāg jləgmō	'body of a camel'
	ətkā	+	mədəgāi	→	ətkāj mədəgāi	'body of a shepherd'
	wānā	+	bələāmā	→	wānəg bələāmā	'work of a village head'
	wānā	+	kōorō	→	wānə kōorō	'work of a donkey'
	āmē	+	tərīk	→	āmək tərīk	'hand of an orphan'
	ūrē	+	dītūwō	→	ūrək dītūwō	'neck of a bird'
	kārēe	+	tlā	→	kārēk tlā	'load of a cow'
	mūtō	+	tūnkō	→	mūtək tūnkō	'death of a sheep'
	dūunōo	+	tlā	→	dūunək tlā	'strength of a cow'
	tlūwī	+	tūnkō	→	tlūwək tūnkō	'meat of a sheep'
	əskī	+	məngərvī	→	əskīj məngərvī	'room for guests'
	əskī	+	wūnyā	→	əskī wūnyā	'girl's room'
	kūnū	+	tlā	→	kūnək tlā	'belly of a cow'
	kūnū	+	kāvūs	→	kūnə kāvūs	'belly of a warthog'
	ūufāi	+	tlā	→	ūufāik tlā	'thing of a cow'
	ūufāi	+	kərdū	→	ūufāi kərdū	'thing of a thief'
	əzgər	+	kōm	→	əzgər(ə) kōm	'foot of a bull'
	wūd	+	tərīk	→	wūdək tərīk	'name of an orphan'

Cases where A<sub>2</sub> begins in a vowel pose no special problems. By rule (101i), the linker /kˈ/ becomes ø. If A<sub>1</sub> ends in a vowel, rule (4), VOWEL CONTRACTION, will apply in the following way: if A<sub>1</sub> ends in -i, -u, -e, -o, or the -a which alternates with -ə, this vowel is "absorbed" into the initial vowel of A<sub>2</sub>; if A<sub>1</sub> ends in "constant" -a, the following combinations result: a + ii → ai; a + uu → au, a + i, u, ə → a; a + a(a) → a(a). (There is no initial e or o.) The floating high tone of /kˈ/ will be on the latter half of the vowel or diphthong resulting from these contractions. If both the original vowels have high tone, the result will be high; if the first vowel has low tone, the outcome will be rising, which is converted to high by general rule.

(105)	ətkā	+	lijē	→	ətkāijē	'body of a dog'
	līdā	+	əvjī	→	līdāvjī	'eye of a monkey'
	wānā	+	ūktlāi	→	wānūktlāi	'work of children'
	ūrē	+	əvjī	→	ūrəvjī	'neck of a monkey'
	mūtō	+	lijē	→	mūtīijē	'death of a dog'

## (105) (cont.)

<i>dūunōo</i>	+	<i>əvjī</i>	→	<i>dūunōovjī</i>	'strength of a monkey'
<i>əskī</i>	+	<i>āabjlāi</i>	→	<i>əskyāabjlāi</i>	'young woman's room'
<i>kūnū</i>	+	<i>əvjī</i>	→	<i>kūnəvjī</i>	'belly of a monkey'
<i>kūnū</i>	+	<i>āayū</i>	→	<i>kūnāayū</i>	'belly of a gazelle'
<i>wūd</i>	+	<i>ūktlāi</i>	→	<i>wūdūktlāi</i>	'children's name'
<i>nyād</i>	+	<i>əvjī</i>	→	<i>nyādəvjī</i>	'side of a monkey'

I cannot state a general rule for constructions where  $A_1$  ends in a diphthong and  $A_2$  begins in a vowel. I collected only three examples of such constructions and each shows a different pattern. In *ərāi* + *ūktlāi* → *ərīyūktlāi* 'place for children', the diphthong is monophthongized and an epenthetic semi-vowel is inserted; in *ākāu* + *ūktlāi* → *ākūūktlāi* 'children's back', monophthongization occurs and the resultant long vowel absorbs the second vowel; in *lišhāu* + *īijē* → *lišhīijē* 'shit of a dog', the diphthong is absorbed into the initial vowel of  $A_2$ .

All the examples in (104) show rule (103), TONE SHIFT, placing the floating high tone of /ḳ/ on the next vowel to the right, i.e. on the initial syllable of  $A_2$ . If  $A_2$  begins in a voiced obstruent followed by ə, the tone is always shifted to the left, i.e. to the final syllable of  $A_1$ :<sup>71</sup>

(106)	<i>īidā</i>	+	<i>dərīimā</i>	→	<i>īidā dərīimā</i>	'eye of a lame person'
	<i>īidā</i>	+	<i>zhəmēn</i>	→	<i>īidāa zhəmēn</i>	'eye of an ostrich'
	<i>āadā</i>	+	<i>zhəmēn</i>	→	<i>āadəə zhəmēn</i>	'head of an ostrich'
	<i>āmē</i>	+	<i>dərīimā</i>	→	<i>āməə dərīimā</i>	'hand of a lame person'
	<i>mūutə</i>	+	<i>zhəmēn</i>	→	<i>mūutəə zhəmēn</i>	'death of an ostrich'
	<i>əgvī</i>	+	<i>dərīimā</i>	→	<i>əgvəə dərīimā</i>	'corpse of a lame person'
	<i>lišhāu</i>	+	<i>zhəmēn</i>	→	<i>lišhūu zhəmēn</i>	'shit of an ostrich'
	<i>ūufāi</i>	+	<i>dərīimā</i>	→	<i>ūufīi dərīimā</i>	'thing of a lame person'
	<i>wūd</i>	+	<i>dərīimā</i>	→	<i>wūdəə dərīimā</i>	'name of a lame person'

In examples where  $A_2$  begins in a voiced obstruent followed by a vowel other than ə, my data are conflicting. In some cases, TONE SHIFT places high tone on the first syllable of  $A_2$ , as in (107a), while in other cases it places high tone on the final syllable of  $A_1$ , as in (107b).

(107)	a.	<i>ətkā</i>	+	<i>gāayīm</i>	→	<i>ətkā gāayīm</i>	'body of a cat'
		<i>ūurē</i>	+	<i>gāayīm</i>	→	<i>ūurə gāayīm</i>	'neck of a cat'
		<i>nāyāu</i>	+	<i>gīiwōn</i>	→	<i>nāyūu gīiwōn</i>	'tooth of an elephant'

<sup>71</sup>I have recorded a final long vowel on all the examples of (106) but one (which may be a transcription error). If proto-Duwai had an epenthesis rule similar to rule (69a) for GB which inserted ə after /ḳ/, the effect of TONE SHIFT would have been to place high tone on this epenthetic ə. With weakening and loss of the velar as suggested above and in the preceding footnote, the result would be high tone on a long vowel between  $A_1$  and  $A_2$ .

(107) (cont.)

b.	<i>ĩidā</i>	+	<i>gām</i>	→	<i>ĩidāa gām</i>	'eye of a ram'
	<i>āadā</i>	+	<i>gām</i>	→	<i>āadāa gām</i>	'head of a ram'
	<i>mūutō</i>	+	<i>gām</i>	→	<i>mūutōa gām</i>	'death of a ram'
	<i>ǝgvĩ</i>	+	<i>gām</i>	→	<i>ǝgvōa gām</i>	'corpse of a ram'
	<i>ĩishāu</i>	+	<i>gām</i>	→	<i>ĩishūu gām</i>	'shit of a ram'

Constructions where A<sub>1</sub> ends in a nasal require the following morphophonemic rule:

(108) NASAL TO ŋŋ

[+nasal] → ŋŋ / \_\_\_\_k'

This rule is applied before (101), LINKER REALIZATION. LINKER REALIZATION and other rules then apply to give forms such as the following:

(109)	<i>bālān</i>	+	<i>tlā</i>	→	<i>bālāŋŋǝk tlā</i>	'beauty of a cow'
	<i>bālān</i>	+	<i>mǝngǝrvĩ</i>	→	<i>bālāŋŋǝŋ mǝngǝrvĩ</i>	'beauty of a guest'
	<i>bālān</i>	+	<i>wūnyā</i>	→	<i>bālāŋŋ wūnyā</i>	'beauty of a girl'
	<i>bālān</i>	+	<i>ũktlāi</i>	→	<i>bālāŋŋ ũktlāi</i>	'beauty of children'
	<i>ǝām</i>	+	<i>māapǝndĩ</i>	→	<i>ǝāŋŋǝŋ māapǝndĩ</i>	'jaw of a young man'
	<i>ǝām</i>	+	<i>āabjłāi</i>	→	<i>ǝāŋŋ āabjłāi</i>	'jaw of a young woman'

Historically, this geminate ŋŋ can be explained as it was on p.64 for associative pronouns, i.e. \*-N + k' > \*-ŋ + k' > -ŋŋ'. In modern Duwai, however, the linker /k'/ has been added on again after the geminate ŋŋ, so that from a historical point of view, Duwai constructions where A<sub>1</sub> ends in a nasal have a double linker.

If A<sub>1</sub> is not expressed or is separated from A<sub>2</sub> by intervening material, A<sub>2</sub> is preceded by ŋgā/k'/.

(110)	<i>ŋgǝk tlā</i>	( <i>tlā</i> )	'that of a cow'
	<i>ŋgā kǝm</i>	( <i>kǝm</i> )	'that of a bull'
	<i>ŋgāabjłāi</i>	( <i>āabjłāi</i> )	'that of a young woman'
	<i>ŋgāa gām</i>	( <i>gām</i> )	'that of a ram'
	<i>ĩidǝm-nō ŋgāakā</i>	( <i>āakā</i> )	'this wood for a fire'
	<i>āakǝǝŋ ŋgāŋ mǝngǝrvĩ</i>	( <i>mǝngǝrvĩ</i> )	'his room for guests'

#### 4. HISTORICAL SUMMARY

A complete reconstruction of the proto-Bade-Ngizim-Duwai determiner system would only be speculative and would go beyond the scope of this paper, which is intended to be primarily descriptive. However, in order to draw together the facts presented in sections 1-3, the following historically oriented summary is offered.

#### 4.1. Morphemes in the Determiner System

##### 4.1.1. The Previous Reference Marker (PRM)

The proto-form of the PRM was reconstructed in section 2 (p. 27) as *\*-kú*. While this proto-form has widely been weakened to *-w(ú)*, the velar stop is still preserved in Ngizim (2.3) and some Duwai dialects (2.4). The uniform semantics and syntax of this morpheme throughout the language group allow us to reconstruct it as a marker of previous reference not sensitive to the gender or number of the noun it refers to. When used as a noun modifier it is a bound suffix. The morpheme can also be used as an anaphoric pronoun to mean 'that of'. This usage has a reflex in the independent possessives in all dialects, e.g. Ng *kô-jâ* 'ours', *kô Dâmzâ* 'Dâmza's' (cf. 4.2.1 below for the claim that the associative linker /k/ and the PRM are reflexes of the same morpheme). Other likely reflexes of the anaphoric use of the PRM are the singular demonstrative pronouns of GB (15) and Duwai (42), e.g. GB *ŋkúwú* 'that one', Duwai *ŋgānō* 'this one'. It is doubtful whether these reflexes of the PRM used anaphorically should be related synchronically to the suffixed PRM.

##### 4.1.2. Gender Sensitive Deictic Bases

A set of gender and number sensitive DEICTIC BASES (basic elements to which further deictic specifications such as distance, etc. can be added) are reconstructable for proto-Bade: *\*n-* for m.sg., *\*t-* for f.sg., and *\*nd-* for plural.<sup>72</sup> This *n-/t-/nd-* pattern has undergone considerable shifting and reanalysis, the result being that no modern dialect preserves it intact. The evidence for it is abundant, however.

The *nd-* plural is universally retained. As an example, consider the "near" plural demonstrative pronouns in the dialects described here: GB *ñdāu*, SB *ñdāu*,<sup>73</sup> WB *ñdō*,<sup>73</sup> Ng *ndāu*, D *ñdūwñō*.

Reflexes of the masculine *\*n-* and feminine *\*t-* are seen mainly in bound demonstrative suffixes. While both are widespread, no modern dialect uses a simple system where masculine nouns always suffix demonstratives in *n-* and feminines those in *t-*. Duwai has extended the masculine *n-* to all nouns, e.g. in the "near" forms *kôm-nō* 'this bull', *tlā-nō* 'this cow' (see 1.5). The feminine *t-* is seen in fossilized forms in Duwai such as *sāatō* 'now' (< 'this time' — cf. WB *sā-n* 'time') and *kāftō* 'today' (< 'this day' — cf. GB *gāfā* 'day'). On the other hand, Ngizim has extended the feminine *t-* to all nouns, e.g. in the "near" forms *kwām-thū* 'this bull', *tlā-thū* 'this cow' (see 1.4). The masculine *n-* is retained in Ngizim in the "particular" suffix *-āngū*, used now with only a few human nouns, e.g. *nñn-āngū* 'this very person' (see pp. 21-22). Both the demonstratives *-thū* and *-āngū* are invariable compounds of the *t-* and *n-* bases plus reflexes of the PRM, *\*-kú*.

<sup>72</sup>This pattern is very close to the *n/t/n* pattern reconstructed by Greenberg (1960) for Afroasiatic. While the plural *nd-* looks like Greenberg's *\*n* plural, it is probably an independent development in the Bade group, unrelated to the Afroasiatic *\*n*. The plural *\*n* is found elsewhere in Bade, however, e.g. in plural suffixes on nouns and verbs.

<sup>73</sup>Use of *m-* rather than *n-* as the nasal element in SB and WB raises questions. The *m-* could be the more archaic form, with assimilation to the following consonant in other dialects. On the other hand, it could be an entirely separate morpheme, since the singular forms also have an initial *m-* for most WB speakers, e.g. WB *msō* (m.sg.), *mcō* (f.sg.). There is no evidence that proto-Bade singular forms should be reconstructed with a nasal element, and in fact some WB speakers use singular *sō*, *cō*, etc. (see comments following (29)).

In GB, the masculine *n-* is seen only in the "far" and "particular" suffixes, e.g. *kwām-ānī* 'that bull', but the feminine *t-* is used in all three deictic categories, e.g. *tlā-tkū* 'this cow', *tlā-tīwū* 'that cow', *tlā-tōndu* 'that very cow' (see section 1.1).

In WB, the masculine *\*n* is nunation (see section 1.3). In Schuh (1975a:10ff.) I outline how nunation as it is presently used must have developed. Briefly, the *-n* suffix was a masculine demonstrative. Its definitizing function weakened to its present function as a marker of indefiniteness. Its masculine gender marking function was also lost, allowing it to be extended to all nouns.

Another reflex of the masculine *\*n-* in WB is a morpheme *nō*, very commonly used to set off topicalized phrases. In this use, it may appear with nouns of any gender or with full phrases.

- (111) *ɔbjlam no, aa kunaawu-ŋ atu*  
 'AS FOR the hyena, it was she who was inside it'  
*atu no, atu aa nee buwan*  
 'AS FOR her, she was going on a trip'  
*pəḍku gadē, aci vāraa iimyaadvaari no, aci da kootē kookanawatari*  
 'one morning, WHEN he had come out to his entrance way, he called together his courtiers'

The feminine *\*t-* in WB is now seen in palatalized form in the demonstratives *mēō*, *mēi*, etc. (see (28)). The demonstrative suffix, *-tkū*, is also used by some WB speakers in a way similar to the morpheme *nō* illustrated in (111).

- (112) *tənaa-tku, kayaan dauktu ŋgacakon da katu amaari*  
 'WELL now, a squirrel took a frog and she became his wife'

From the time of proto-Bade-Ngizim-Duwai it seems to have been possible to compound the demonstrative bases with the PRM, *\*kū*.<sup>74</sup> This was pointed out above for the Ngizim morphemes *-tkū* and *-āngū* (< *\*kū* added to *\*t-* and *\*n-* respectively). The "far" forms of the demonstratives are also found compounded with *\*-kū* in both Bade and Ngizim, where the modern dialects always realize it as *-wū*: Ng *-tīwū* (all numbers and genders), GB *-tīwū* (f.sg.), SB *mīiīwū* (m. or f.sg.). That the *-wū* is not part of the demonstrative, at least diachronically, is seen from the fact that some dialects do not use it at all, e.g. WB *mīi* (m.sg.). Others may add it to give a difference in meaning (cf. fn. 11). In Duwai it is indeed the addition of *\*-kū* which changes the demonstrative meaning from "near" to "far," e.g. *nō* 'this', *nāwō* 'that' (cf. (40)).

The "near" forms such as Ng *sāu* 'this one' (m. or f.), WB *ŋkāu* 'this one' (m. or f.), WB *mōō* 'these', etc. must have developed from a construction of the form *\*C<sub>d</sub>i + aa + kū*, where *\*C<sub>d</sub>* is the demonstrative base consonant, *\*i* is the vowel of the "near" demonstrative, *\*aa* is a vowel used with certain bound suffixes (cf. section 4.2.2 below), and *\*kū* is the PRM. The vowel *aa* "absorbed" the vowel of the demonstrative by rule (5), VOWEL CONTRACTION; the *\*k* or *\*ku* weakened to *w*; and the final vowel of the resulting *\*wu* was apocopated with automatic shortening of *aa* in the closed syllable, leaving a diphthong *-au* (> *-o* in WB — cf. fn. 8).

<sup>74</sup>The same compounding of demonstrative and PRM is found in modern Hausa: *gīdāa* 'compound', *gīdā-ŋ* 'the compound in question' (PRM), *wānnān gīdāa* 'this compound' (demonstrative alone), *wānnān gīdā-ŋ* 'this compound' (demonstrative + PRM). The latter phrase type seems to have a meaning like that of Bade phrases using the "particular" demonstrative. This fact suggests that such a meaning may have originally accompanied addition of the PRM to other demonstrative bases.

Thus, in the modern languages, the PRM *\*-kū* has in some cases become blended with the demonstrative and is now an inextricable part of it, as in the "near" forms in *-āu* and in the widespread feminine *-tkū*. In other cases, the addition of the reflex of *\*kū* to a basic demonstrative changes the meaning, as with Duwai *nō* 'this', *nāwō* 'that' or SB *ṁsīi/ṁsīiwl* 'that'.

#### 4.1.3. Morphemes Differentiating Deictic Categories

The existence of the three way deictic distinction "near"/"far"/"particular" in all the modern branches of this language group shows that these three categories existed in the proto-language. Reconstruction of the morphemes which realized the three categories in the proto-language cannot be done with certainty since the marking in Duwai is quite different from that in Ngizim and Bade.

Those Duwai dialects marking the three-way distinction have a "near" form *nō* to which is added a "far" suffix *-kō* and a "particular" suffix *-wō* (cf. (40) and (42)). Both *-kō* and *-wō* probably developed from the PRM, *\*-kū*, at a time when the *\*k* was weakening to *w* but still alternated, perhaps in free variation, with *k*. These morpheme alternates split semantically, realizing a distinction which may have had some other manifestation at an earlier period.

Modern Bade and Ngizim basically have the following system, where *C<sub>d</sub>* is the demonstrative base: *C<sub>d</sub>āu* "near," *C<sub>d</sub>īi(wl)* "far," *C<sub>d</sub>ōnū* "particular." In 4.1.2, it was hypothesized that the "near" constructions historically come from *\*C<sub>d</sub>i-aa-kū*, *\*kū* being the PRM and *\*aa* being a vowel automatically inserted in such constructions. Likewise, the *-wū* used in some dialects with the "far" forms is from the PRM, *\*-kū*. If we delete the PRM, which was surely at one time optional, we are left with the following proto-system: *\*C<sub>d</sub>i*, *\*C<sub>d</sub>īi*, *\*C<sub>d</sub>ōnū*. This must be something very much like what was found in proto-Bade-Ngizim. Taking one more historical step back, it looks as if there was a single deictic base, *\*C<sub>d</sub>i*, which could be lengthened to *\*C<sub>d</sub>īi* for "distance" or compounded with the morpheme *-nū* (itself a reflex of the masculine *\*n*) for "particularization."

#### 4.1.4. Demonstrative Pronouns

The discussion in 4.1.1-3 has centered on bound demonstrative suffixes and a three-way gender and number sensitive set of bases, *n/t/nd*. Demonstrative pronouns in the modern languages use a somewhat different set of deictic bases. These are of two types:

##### (a) Duwai and GB

- singular referent: velar base (undifferentiated for gender) + deictic category marker (cf. 4.1.3), e.g. GB *ṁkāu* 'this one' (m. or f.), Duwai *ṁgāanāwō* 'that one' (m. or f.)
- plural referent: *nd-* + deictic category marker, e.g. GB *ṁdīiwl* 'those', D *ṁdīiwnō* 'these'

##### (b) SB, WB, Ngizim

- singular referent: *s-* + deictic category marker, e.g. Ng *sāu* 'this one' (m. or f.), SB *ṁsīiwl* 'that one' (m. or f.), WB *ṁsō* 'this one' (m.)
- t-* + deictic category marker, e.g. WB *ṁcō* 'this one' (f.), WB *ṁcīi* 'that one' (f.)
- plural referent: *Nd-* + deictic category marker, e.g. Ng *ndāu* 'these', SB *ṁdīiwl* 'those', WB *ṁdō* 'these'



In type (a), the velar base is a reflex of the PRM, *\*-kũ*, used anaphorically. Synchronically, there is no advantage in trying to relate the suffixed PRM to these demonstratives. Phonologically, they now have little in common. Moreover, the PRM is invariant for number, but the velar demonstrative base is used only when the referent is singular.

In type (b), we can reconstruct *\*s-/\*t-/\*nd-* as masculine/feminine/plural demonstrative pronoun bases respectively. Only WB preserves this gender correspondance intact. In both Ngizim and SB, the gender distinction in singular demonstratives has been lost and only the *s-* base is used. SB has entirely lost the *t-* base (cf. 1.2), while Ngizim has developed a new type of system where the *s-* base marks a pronoun, the *t-* base marks an adjective (cf. 1.4).

#### 4.1.5. Deictic Predicators

In all the languages and dialects except Duwai, the deictic predicators resemble the demonstrative pronouns. In particular the two deictic base systems of velar/*nd-* and *s-/t-/nd-* seen with pronouns in the preceding section correspond exactly in the respective languages to the bases used with deictic predicators, e.g.

(113)	Pronoun		Deictic Predicators	
GB	<i>ŋkãu</i>	'this one'	<i>ŋkãa</i>	'here it is'
	<i>ndĩuwl</i>	'those'	<i>ndĩi</i>	'there they are'
Ngizim	<i>sĩuwl</i>	'that one'	<i>sĩi</i>	'there it is'
	<i>ndãu</i>	'these'	<i>ndãw</i>	'here it is'
	(no <i>t-</i> base used for either pronoun or deictic pred.)			
WB	<i>msõ</i>	'this one' (m.)	<i>msãa</i>	'here he is'
	<i>mcĩi</i>	'that one' (f.)	<i>mcĩi</i>	'there she is'
	<i>mdãndõ</i>	'these very ones'	<i>mdãnda</i>	'right here they are'

These facts suggest that the deictic predicators are historically pronouns and deictic sentences such as WB *msãa-yũ* 'here I am' developed from sentences meaning *\*'this one is me'*.

#### 4.2. Determiner Constructions with Bound Morphemes

##### 4.2.1. The Associative Linker

In the languages discussed here, all the overt linking morphemes other than *-aa-* (see 4.2.2) used in associative constructions historically derive from determiners. The historical antecedents of these associative constructions could thus all be roughly translated as 'A<sub>1</sub> that of A<sub>2</sub>'. This is most clearly the case in Bade constructions where A<sub>1</sub> is a noun other than an Inalienable Noun and A<sub>2</sub> is an associative pronoun (cf. 3.1.1, 3.2.1, 3.3.1) or a Specific Noun (cf. 3.1.3, 3.2.3, 3.3.3). In these cases, reflexes of the linking morphemes are still in use as demonstratives in GB:

(114)	GB Demonstratives		GB Constructions w. cor. linker	
(masc.)	<i>kũn-ãanĩ</i>	'that belly'	<i>kũn-ãan-jã</i>	'our belly'
			<i>kũn-ãan Cãakwã</i>	'Cakwa's belly'
(fem.)	<i>ãkũ-tkũ</i>	'this goat'	<i>ãkũ-tk-ĩi</i>	'your goat'
			<i>ãkũ-tkõ-k Zãbã</i>	'Zaba's goat'

The GB associative constructions in (114) are matched in SB and WB. The linking morphemes in the latter dialects have been dissociated from their demonstrative origins as can be seen from the fact that these dialects no longer use demonstratives of those particular shapes.<sup>75</sup>

The linker /k/ used in all the dialects described here also has a demonstrative origin, namely the PRM *\*-kū*. In the same way that the linkers illustrated in (114) have been dissociated from the demonstrative system, so has the linking /k/ been dissociated from the PRM. This dissociation took place at a very early date and indeed may have taken place prior to proto-Bade-Ngizim-Duwai. For evidence that the PRM and the linker /k/ are no longer the same morpheme in the minds of Bade speakers, we need only note the entirely different paths the two have taken phonologically, e.g.

(115) Ngizim: Linker	{	∅	optional in all environments
		gɔ̃	/C__C
		g	/__ [+voice]
		k	elsewhere
PRM	{	ɛw	/V__
		-gū	/C__

In the first paragraph of this section, it was stated that OVERT linking morphemes all have demonstrative origins. There is evidence, however, that proto-Bade-Ngizim-Duwai did not require any overt linker in at least some associative constructions. The most certain case is that of Inalienable Nouns with associative pronouns as A<sub>2</sub>. In these cases, the pronoun is directly suffixed with only intervening long -aa- (cf. 4.2.2 for discussion), e.g. GB *ām-āa-lī* 'his wife' (< *āmā* 'wife' — cf. *kāzā-tkō-lī* 'his hen' < *kāzā* 'hen'). In modern Bade the "direct" construction is restricted to the small class of Inalienable Nouns. Whether this construction was restricted in this way in proto-Bade-Ngizim-Duwai or was more general cannot be determined with certainty. In Duwai this construction type is used in all cases where A<sub>2</sub> is a plural pronoun. A similar construction is used with singular pronouns but the vowel preceding the pronoun varies depending on the final vowel of A<sub>1</sub> (see (99) and (100)). In Ngizim, all pronouns but first and third persons singular use a "direct" construction after any A<sub>1</sub> (cf. (93) and (94)).

In addition to these direct associative constructions with pronouns, there are a number of cases in the language group where an overt linker is not used before a noun in A<sub>2</sub> position:

- (a) In Bade, there is no overt linker when A<sub>2</sub> begins in a velar. This could, of course, be nothing more than avoidance of geminate clusters which would result from juxtaposing /k/ with a velar.
- (b) In Ngizim, an overt linker is never required in associative noun phrases where A<sub>2</sub> is a noun, but note that the rule of TONE DISSIMILATION, (96), applies even where there is no overt linker. An overt linker bearing the tone now found on the final syllable of A<sub>1</sub> may have at one time been obligatory in all environments.

<sup>75</sup>I am inclined to believe that no synchronic connection should be made between the demonstratives and the linkers in GB either. Note that GB masculine and feminine demonstratives belong to different deictic categories ("far" and "near" respectively). This must be a result of shift in the meaning of the masculine demonstrative. There is no corresponding meaning shift in the masculine linker, suggesting that it is not synchronically connected to the masculine demonstrative.

(c) In Duwai, no linker is used in Noun + Noun constructions when A<sub>2</sub> begins in a velar or a vowel. However, as in Ngizim, certain tonal alternations are required (see (103)) even when no overt linker is present, suggesting the original presence of a segmental linking morpheme whose tone remains.

In summary, the modern overt linking morphemes seen in the languages investigated here all derive historically, through phonological reduction or syntactic reinterpretation, from demonstratives which were anaphoric to A<sub>1</sub> of associative constructions. It is certain that not all (possibly no) constructions where A<sub>2</sub> was a pronoun required a linker. In constructions where A<sub>2</sub> is a noun, there is evidence, admittedly debatable, that the proto-language required no linker either.

#### 4.2.2. The 'Morpho(pho)neme' -aa-

Repeated reference has been made to a long -aa- appearing before certain bound suffixes. This -aa- is a "morphoneme" in the sense of Kuryłowicz (1968). Of the concept morphoneme, Kuryłowicz says (p. 70), "We call morphonemic a stage within a morphological (derivational) process or transformation, which is redundant from the morphological (semantic, syntactical) standpoint, but significant from the phonemic (diacritic) point of view."

The main environments where the morphoneme -aa- is found are the following:

(a) It precedes reflexes of the masculine \*-n demonstrative suffixes, including the GB "far" morpheme (*kwām-āa-nī* 'that bull'), nunation in WB (*kūn-āa-n* 'belly'), and the "particular" demonstrative used with human referents in Ngizim (*nēn-āa-ngū* 'this very man').

(b) It precedes reflexes of the PRM, \*-kū, including the PRM in WB (*kūn-āa-w* 'the belly in question'), the GB masculine "near" demonstrative suffix (*kwām-āa-w* 'this bull'), and the "near" demonstrative pronoun in most of the languages (Ngizim *sāu* 'this one' < \*s-āa-kū, WB *mō* 'this one' (f.) < \*m-t-āa-kū).

(c) It precedes the directly suffixed associative pronouns, including Bade constructions where A<sub>1</sub> is an inalienable noun (GB *ām-āa-gāi* 'your wife'), Ngizim with any A<sub>1</sub> before pronouns in most persons (*kūn-āa-cī* 'your (m.sg.) belly'), and in Duwai with any A<sub>1</sub> before the plural pronouns (*kūn-āa-kū* 'your (pl.) belly').

(d) It is found between the components of many compound nouns, e.g. WB *ād-āa-bzēkēn* 'rubbish heap' (head-aa-rubbish heap) (see fn. 62).

Following Kuryłowicz' definition, -aa- is a morphoneme since its presence does not MARK the type of construction in which it occurs but rather is CONDITIONED by it. In some cases, -aa- must now be considered part of the suffix with which it occurs since the suffixes in question never appear without it, e.g. with the GB masculine demonstrative suffixes -āaw and -āanī and the Duwai plural associative pronouns. Historically, it must have been present only in a specific phonological environment, viz. it appeared only when the head noun ended in a vowel. This conditioning is seen, for example, in WB where -aa- appears with nunation and the PRM only when the noun historically ended in a vowel (*kūn-āa-n* 'belly' < \*kūnū but *kwām-āa-n* 'bull' < *kwām*), and in Ngizim before associative pronouns only when the head noun ends in a vowel (*kūn-āa-cī* 'your (m.sg.) belly' < *kūnū* but *kwām-cī* 'your bull' < *kwām*). This must have been the original rule, which was extended by analogy to all appearances of the suffixes in question, rather than for -aa- to have originally appeared everywhere, later being restricted to this environment.<sup>76</sup>

<sup>76</sup>Parallel cases of extensions of morphonemes can be cited. Kuryłowicz (1968:75) notes that the morphonemic process of umlaut accompanies addition of the productive diminutive suffix -chen in German, though there is in modern German no phonological reason for umlaut to appear.

I will close this section and the paper on a comparative note: there is evidence that use of a morphoneme of the type discussed here may be traced back to a much earlier date in the history of the Chadic family. In Hausa, it is well-known that all nouns require a long vowel before the first person singular possessive construction, regardless of the final vowel length of the noun in isolation,<sup>77</sup> e.g. *hānnūu* 'hand', *hānnūu-n-āa* 'my hand' (hand-that of-me); *cūkū* 'cheeze', *cūkūu-n-āa* 'my cheeze'. Parallel to, and cognate with the -aa- of Bade, this morphoneme of lengthening in Hausa is conditioned by the deictic suffixes \**na* (m.sg.; pl.) and \**ta* (f.sg.). In modern Hausa, the final vowel of these deictics has been apocopated so that in nearly all environments they close the syllable of which they are a part. Since only short vowels can appear in closed syllables, there is only one environment where the length morphoneme can appear in "Standard" Kano Hausa, viz. before the first person singular pronoun, which is the only one beginning in a vowel: *cūkūu-n-āa* 'my cheeze', but *cūkū-n-sā* 'his cheeze', *cūkū-n* 'the cheeze'. In Western Hausa, however, the third person possessive constructions also have an open syllable environment. The associative pronoun constructions are -*nā-i* 'his' (m.sg. or pl. A<sub>1</sub>), -*tā-i* 'his' (fem. A<sub>1</sub>), and as expected the long vowel is heard: *cūkūu-nā-i* 'his cheeze'.

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<sup>77</sup>As far as I know, this fact was first pointed out in Carnochan (1951). The examples here are taken from his paper.

## *Announcing . . .*

### THIRD INTERNATIONAL HAMITO-SEMITIC CONGRESS

As the result of a decision taken by the International Committee in Florence in April 1974, the Third International Hamito-Semitic Congress will be held in London.

The Local Committee now take pleasure in inviting interested parties to participate and in announcing that the meetings will take place on the 29th, 30th and 31th of March 1978 at the School of Oriental and African Studies, University of London, Malet Street, London WC1.

The attendance fee for the Congress will be £10 for ordinary participants and £5 for students.

Those wishing to participate at the Congress or to contribute a paper will kindly address their intentions to Dr. J. Bynon, School of Oriental and African Studies, University of London, London WC1E 7HP. Please include name, affiliation, address, and topic of paper to be presented. Also state whether you wish assistance in the booking of hotel accomodation. Papers should deal with the topic of the Congress, which is the historical comparison of members of the postulated language family or the internal reconstruction of their earlier language states.

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Professor James E. Redden, Department of Linguistics, Southern Illinois University, Carbondale, Ill. 62901, is now Section Head for the African Linguistics Section and the Afroasiatic Section of the annual *Modern Language Association of America International Bibliography*. All articles published in the standard linguistics journals on African and Afroasiatic linguistics are automatically included in the *MLA* bibliography. But, it is very difficult to find many articles published in other than the standard linguistics journals. It is also very difficult to find many of the books published on these languages. If authors of articles in other than the standard linguistics journals and of all books on African and Afroasiatic languages and linguistics would send the complete bibliographic references on these items to Professor Redden, the annual *MLA* bibliographies would be able to have a more thorough coverage. Likewise, if anyone knows of articles or books by someone else that might be missed, these complete bibliographic references should be sent in also.

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